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GEOGRAPHY OF NEW YORK THE STATE - THE CITY





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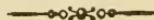


NIAGARA FALLS.

GEOGRAPHY
OF
NEW YORK

THE STATE—THE CITY

BY
FLOYD R. SMITH
AND
ARTHUR C. PERRY, JR.



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PREFACE

THE many-sided importance of the state of New York, and its predominance as a factor in the development of our national greatness, have been too little appreciated by the pupils of the state, and particularly by those of the city of New York. However, a decided advance was made in the Course of Study for the Public Schools of New York City, adopted in 1902, which requires, in the fifth year of the school curriculum, a definite study of the geography of the state and of certain topics in the history of the city.

It is the aim of this volume to present the topics of the New York City "syllabus"—both geographical and historical—in orderly arrangement, and in language adapted to the understanding of the pupils of the grade.

The book therefore divides itself into two parts. The first treats of the geography of the state, showing nature's many contributions and the use man, in his tireless industry, has made of them. The second part treats ~~of~~ further detail of the city of New York, by presenting both its chief geographical features and a brief sketch of its early history.

It is hoped that the book may be of service to pupils throughout the state, acquainting them with the various factors of growth, showing them how these factors have made the state the foremost in the Union, and thus implanting that local pride which in due season shall ripen into a broad and intelligent national patriotism.

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THE STATE OF NEW YORK

LOCATION

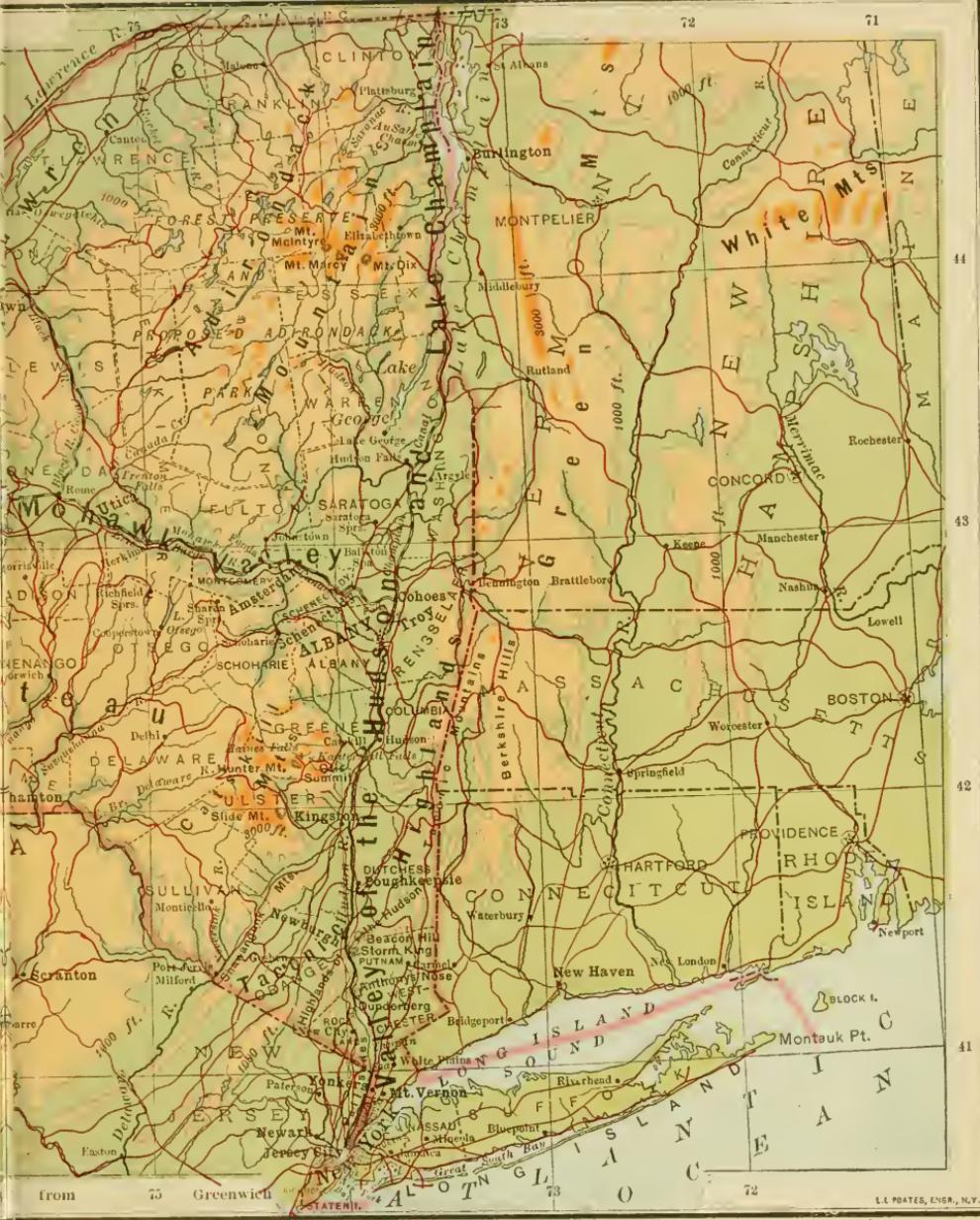
NEW YORK is the northernmost of the Middle Atlantic states, with Pennsylvania and New Jersey on the south and southwest, Vermont, Massachusetts, and Connecticut on the east, and the Canadian provinces of Ontario and Quebec on the north and northwest. The general form of the state is that of a triangle, with Long Island added at the southeastern corner. The Canadian boundary line runs through the middle of Lake Erie, Niagara River, Lake Ontario, and the St.



TRI-STATE ROCK, PORT JERVIS.

Lawrence to the forty-fifth parallel of north latitude, and thence eastward to the outlet of Lake Champlain. The dividing line between the state and New England follows the deepest channel of Lake Champlain for more than a hundred miles, and then extends overland in an irregular southerly line, finally turning eastward through the middle of Long Island Sound. The parallel of 42° north latitude and the Delaware River form the Pennsylvania boundary line. From Port Jervis, where three states meet,





the New Jersey boundary line runs southeast to the Hudson and thence south to New York Bay. South of Long Island spreads the Atlantic Ocean, the great highway for the common use of the nations of the world.

SURFACE

If you look at a map of the United States, you will see that the Appalachian Highlands, which for a great distance lie almost

parallel with the Atlantic coast, extend into and across New York. Hence there are in this state long ranges of mountains and many high peaks. But these mountains have been cut through by so many powerful rivers that the surface is everywhere broken up into highland and lowland. In general, it may

be observed that the eastern portion of the state is mountainous and the western much more level. The chief **LOWLAND** tracts are three in number.

(1) **The Valley of the Hudson and Lake Champlain**, narrow, but 300 miles or more in length, extends north and south across the state.

(2) **The Valley of the St. Lawrence**, a long strip of lowland of varying width, descends from the level of the Appalachian Highlands to the shores of the Great Lakes and their outflowing river.



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LONG LAKE, ADIRONDACK MOUNTAINS.

This descent is made by a series of terraces, two of which can be plainly seen. The lower is called the *Lake Ridge*, and the higher the *Mountain Ridge*.

(3) The Valley of the Mohawk connects these two lowlands. Its length is not much more than a hundred miles, yet it is of great importance, not only as the most fertile valley of the state, but because it is the only break through the Appalachian Highlands south of the St. Lawrence and Lake Champlain. In the early days it was used by the Indians and fur traders, and to-day, by means of canals and railroads, it is the chief route of travel and commerce to and from the great West.

These three great valleys together have the general form of a figure 4. The chief HIGHLAND regions are *four* in number.

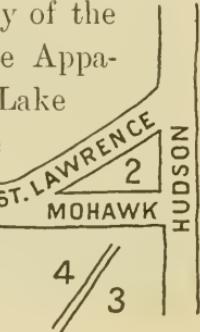
(1) The Taconic Highlands extend across the southeastern part of the state and lie mostly on the eastern side of the Hudson

River. They form the connecting link between the Blue Ridge Mountains of Virginia on the southwest and the Berkshires of Massachusetts and the Green Mountains of Vermont on the northeast. At some



HIGHLANDS OF THE HUDSON.

places they reach a height of 2500 feet. The Taconic Highlands include the Shawangunk and Delaware mountains, west of the



1. Taconic Highlands.
2. The Adirondacks.
3. The Catskills.
4. The Alleghanies.

Hudson; the Highlands of the Hudson, on both sides of the river; and the Taconic Range, northeast of the Highlands. In

the Highlands of the Hudson are many peaks (as the Dunderberg, Anthony's Nose, Storm King, and Beacon Mountain), which, though not of great height, are famous on account of their history and their beauty.

(2) The Adirondacks, the highest and

most picturesque mountains of the state, are bounded by all three of the great valleys. The eastern slope, to Lake Champlain, is very abrupt. Mt. Marcy, towering a mile above the ocean level, is the highest peak. Some of the others are Mt. McIntyre,



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MT. MARCY.

Mt. Clinton, and Mt. Dix. Among the Adirondack Mountains are many favorite haunts of the tourist. On most of the lakes thousands of people find accommodation in the beautifully located hotels, while many others set up camps on private or government lands.

(3) **The Catskills**, rising some ten miles west of the Hudson, slope down on the north to the Mohawk Valley. This mountain region, second only to that of the Adirondacks in height and

beauty, is one of the most popular of summer resorts. The highest peaks are Slide Mountain and Hunter Mountain, each with an altitude of more than 4000 feet. Eastward from Hunter Mountain is Otis Summit, from which spreads a magnificent



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FISHING IN THE ADIRONDACKS.



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VIEW FROM OTIS SUMMIT.

picture of mountain, valley, and the distant Hudson. The Otis Elevating Railway extends from the summit to the valley below.

(4) The Allegheny Plateau extends from the Catskills westward across the state to within five miles of Lake Erie. On the north this table-land ends within thirty miles of Lake Ontario. Its elevation above sea level varies from 1000 to 2000 feet, while a few peaks reach an altitude of nearly 3000 feet.



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KAATERSKILL FALLS,
CATSKILLS.

(3) The valleys of the Hudson and Delaware, which separate the ranges south of the Catskills, the Delaware, Shawangunk, etc.

DRAINAGE

River Systems. — The lowland regions are in every case valleys formed by rivers which through thousands of years have cut their way from mountain top to ocean level. Even the lakes are really only wider rivers. The waters from New York all find their way to the Atlantic Ocean, although through ocean arms as far

apart as the Gulf of St. Lawrence and the Gulf of Mexico. The river systems represented are five in number: the St. Lawrence, the Hudson, the Delaware, the Susquehanna, and the Mississippi.

Rivers.—The most important of the rivers are as follows:—

(1) In the *St. Lawrence* system there are, first, the border rivers, the Niagara and the St. Lawrence, the one feeding Lake Ontario and the other draining it.

Then there are the rivers flowing into Lake Ontario. The Genesee River rises in northern Pennsylvania, at an altitude of 2500 feet, and is the only river flowing entirely across the state. It is some 200 miles long, and in its lower part, cutting its way down from the Allegheny Plateau, it flows between great sandstone cliffs hundreds of feet high. The Oswego, formed by the junction of the Seneca and Oneida rivers, is but twenty-four miles long, yet as the outlet of the Central Lakes it discharges a very large volume of water. The Black River rises in the Adirondacks and is about 120 miles long.



GENESEE RIVER.

The other rivers of the system are those flowing directly into the St. Lawrence or through Lake Champlain, all of which have their sources high in the Adirondacks.

(2) In the *Hudson* system is the Hudson River, the longest river of the state. It lies entirely within the state, and flows 350 miles from the Adirondacks south into New York Bay. For the last 150 miles of its course it is navigable for steam-boats, and in the last hundred it makes a fall of only five feet.

To the lover of nature a trip up the Hudson on one of the river steamers is a never-failing delight. Before leaving New



THE PALISADES.

York city, one may see the lofty Palisades rising on the left. These immense cliffs extend from Weehawken to Nyack and at one point reach a perpendicular height of 550 feet from the river's level. The Palisades are to be kept by the states of New York and New Jersey as a public park, with a fine road running at their base along the river's edge for fifteen miles or more. At the Tappan Zee, and again at Haverstraw, the river broadens to a width of more than three miles. All along, on either bank,

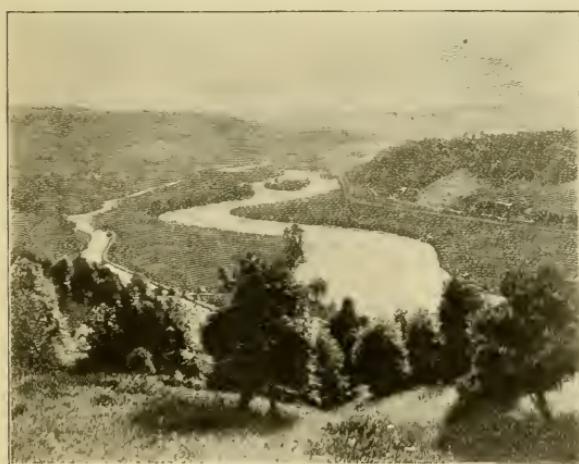
are thriving villages, and a mile above Haverstraw there comes to view the lighthouse at the foot of the battle ground of Stony Point. Beyond, at a bend in the river, near the village of Peekskill, the Dunderberg Mountain stands sentinel at the southern entrance to the Highlands. North to Newburgh the river winds most beautifully in and out between the steep mountains. Beyond the Highlands it grows narrower, and its banks become



STONY POINT.

more and more level until we arrive at the capital city, Albany. At Cohoes, a few miles farther north, its chief tributary, the Mohawk River, empties into the Hudson.

The Mohawk has an entire length of 175 miles, and from the city of Rome descends eastward some 450



MOHAWK VALLEY.

feet. Many prosperous cities are situated along its banks and are of interest both commercially and historically.

The other branches of the Hudson are not of great importance.

(3) In the *Delaware* system the principal water course is the Delaware River, which rises by two branches, the east and the west, in New York state. As we have already noted, it forms the boundary line between Pennsylvania and New York for about seventy-five miles of its length. Its chief tributary is the Neversink.

(4) The *Susquehanna* system includes the headwaters of the Susquehanna River and its tributaries. This river rises in Otsego



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SUSQUEHANNA RIVER.

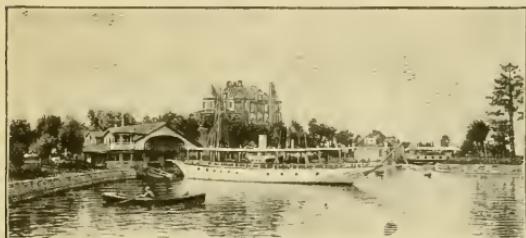
Lake, within twenty miles of the Mohawk, but hundreds of feet above it. It flows into Pennsylvania and back into New York before finally leaving the state for its course through Pennsylvania. It has a large number of tributaries in New York, chief of which are the Chenango and Chemung.

(5) The *Mississippi* system. Tributaries of the Allegheny River rise near the very edge of the Allegheny Plateau, within less than ten miles of the Lake Erie shore. The waters of these tributaries thus flow away from the St. Lawrence system, for hundreds of miles, seeking an outlet which they finally find, through the Mississippi, in the Gulf of Mexico.



SCENE AMONG THE THOUSAND ISLANDS.

Islands.—In the St. Lawrence and Hudson river systems are most of the islands of the state, which may be divided into two groups.



SUMMER RESIDENCE, THOUSAND ISLANDS.

rocky patches, known as the Thousand Islands, in the St. Lawrence. The Thousand Island region is a paradise for summer excursionists. In the very heart of the region, on the New York shore, is Alexandria Bay, whose natural beauty has attracted visitors from all parts of the globe. A sail from this point through the island channels presents a variety of scenery nowhere surpassed. Magnificent hotels, pretty cottages, and summer camps



ONE OF THE THOUSAND ISLANDS.

lie amid the wildest and most picturesque natural surroundings.

The Southeastern Group is at the mouth of the Hudson River. Manhattan Island, fourteen miles in length and less than three in width, but the most remarkable island of the world, is separated from the mainland on the north by the Harlem River. Staten Island, three times the size of Manhattan, lies five miles to the south of it. Long Island, separated from Man-



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A CASCADE.

scent. A river may flow for miles with but a slight decline, and then suddenly plunge over a rocky wall in a number of cascades, or drop in a single fall. Many of the rivers of New York contain waterfalls of great beauty and often, as we shall see later, of great use.

The *Niagara Falls* are the most noted of these. The immense volume of water from four of the five Great Lakes passes to Lake Ontario by way of the narrow Niagara River. Over the rocky bed of this river it flows, until in the course of half a mile it descends forty feet, thus forming what are known as the

Manhattan by the East River, which is really only a strait, is about 110 miles long and varies from eight to twenty miles in width. There are also numerous small islands near Long Island.

Waterfalls.—It must be remembered that very few rivers flow with a uniform de-

Rapids of the Niagara. Then it drops four times this height in a stupendous fall. Goat Island divides the mile-wide stream at this point so that the fall is made in two branches, the narrower American Falls, 167 feet high, and the broader, horseshoe-shaped Canadian Falls,

158 feet high. Below the falls the river forms what is known as the Whirlpool Rapids, and later, broadening into one of the calmest of streams, empties into Lake Ontario.

In the Genesee River there are two groups of falls, one at Portage, where there is a descent of 330 feet in three miles, and the other at Rochester, where there is a drop of 200 feet in three

cascades. At what is known as the Middle Fall at Portage, the river has worn out of the bank a curious cave called the Devil's Oven, large enough to hold a hundred people.

In the lower course of the Au Sable River there is a number of swirling rapids and dashing falls



NIAGARA FALLS.



WHIRLPOOL RAPIDS.

beyond which is the famous *Au Sable Chasm* where the river rushes for two miles between sheer walls of rock a hundred feet in height and only fifty feet apart.



AU SABLE CHASM.

any size, and the Susquehanna has only *Lake Otsego*, which, at an altitude of 1200 feet, is at the source of that river. In the Mississippi system there is *Lake Chautauqua*, a beautiful sheet of water in the extreme western part of the state. It is 1300 feet above sea level — 700 feet higher than Lake Erie, only eight miles away. The Hudson River system contains a few of the famous Adirondack lakes, but, as has been remarked, the sys-



LAKE CHAUTAUQUA.

tem which includes the greatest number of lakes is that of the St. Lawrence. Most important of all are the border lakes: *Lake Erie* with its surface nearly 600 feet above sea level, and not navigable in winter; *Lake Ontario*, more than 300 feet lower than Erie, and never frozen over;



LAKE CHAMPLAIN.



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LAKE GEORGE.

and *Lake Champlain*, the northern gateway of the state, beautifully surrounded by the Adirondacks and the Green Mountains. Tributary to Lake Champlain is the picturesque *Lake George*, some forty miles in length, and famed for its clear water, its throng of little islands, and its wild, wooded



BABY ISLAND, LAKE GEORGE.

shores. Ticonderoga Creek connects Lake George with Lake Champlain, into which it empties, after a descent of 200 feet, not far from the site of old Fort Ticonderoga. Also finding their outlet into the St. Lawrence, through either the rivers flowing directly into it or thosé feeding Lake Champlain, are most of the Adirondack lakes, brilliantly set amid the



FORT TICONDEROGA.

forests of the great mountains. In the central part of the state is the group of lakes which from their shape are often known as the *Finger Lakes*. We have seen that the Oswego River is their outlet into Lake Ontario. The most important of them are *Cayuga*, *Seneca*, and *Oneida*, all navigated by steamboats. At the head of Seneca Lake are the wonderful *Watkins Glen* and *Falls*. The former is a great gorge in a rocky plateau, about three miles in length and reaching a depth of 300 feet. Through the Glen a swirling mountain brook breaks its way in a number of rapids, cascades, and falls. Near the western shore of Cayuga Lake are the graceful



WATKINS GLEN.



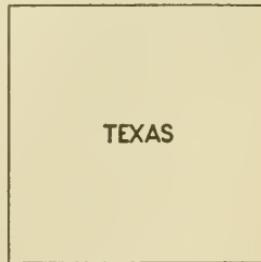
TAUGHANNOCK FALLS.

fourths of that of all New England, but less than one fifth of that of Texas, and its water surface is greater than the entire area of Rhode Island. The length and width of New York are each over 300 miles, and its surface is nearly 50,000 square miles. A most important fact is that the state has a water frontage of nearly 1000 miles. Politically, the state is divided into sixty-two counties, the most populous of which is New York, and the largest in area. St. Lawrence.

Taughannock Falls, fifty feet higher than Niagara, which rush into a ravine whose walls are 400 feet high. In the neighborhood are more than a dozen other important waterfalls. Indeed, the whole region about these lakes abounds in attractive scenery.

SIZE

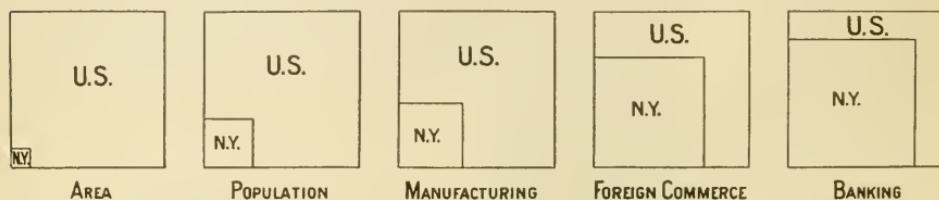
New York is not by any means one of the largest states in the Union. In fact, of the forty-eight states, twenty-eight are larger than New York. Yet its area is more than three



RELATIVE AREAS

IMPORTANCE

We have already seen that New York has advantages of location, surface, drainage, and size, which, properly used, would make the state one of great importance. As a matter of fact, it is easily the first state of the Union—the Empire State, as it is called. Its area is only one seventieth of that of the United

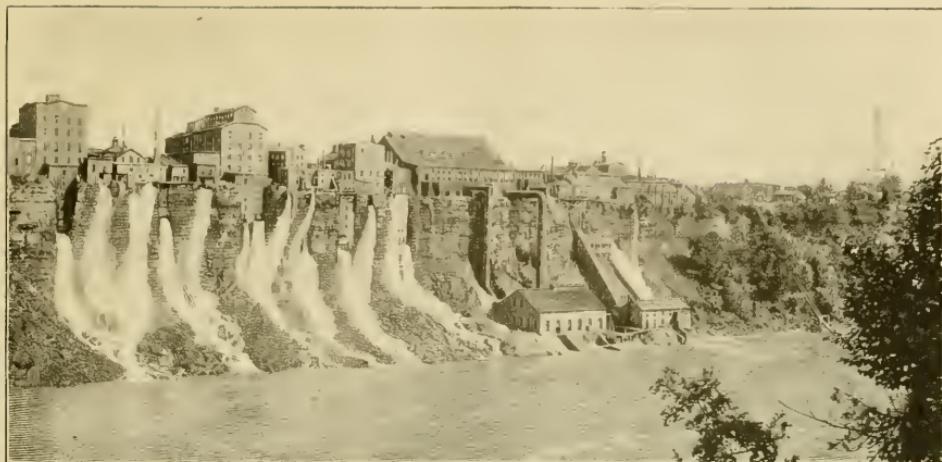


States; and yet it has about one tenth of the population, the value of its manufactures is one sixth, it handles nearly one half of the foreign commerce, and it carries on four sevenths of the banking business. Since 1820 New York has led the states of the Union in population, having been fifth in 1790, third in 1800, and second in 1810. It now has about 10,000,000 inhabitants. More than this, the state has a foremost place in literature, art, and education.

RESOURCES

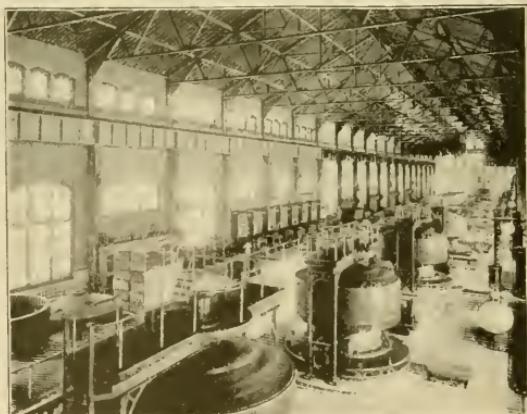
We have spoken of the physical advantages of New York. Let us see more closely what they are.

Water Power.—We have seen that the land is so shaped and located that there is a long water frontage,—on lake, river, and ocean,—that there are rivers upon which boats may be run.



NIAGARA WATER POWER.

and yet other rivers wherein are huge waterfalls. These falls are valuable as sources of power. In some cases, as in the falls of the Genesee at the city of Rochester and in the falls of the Oswego at the city of Fulton, the falling water is made to turn mill wheels which set in motion all kinds of machinery. In the case of the falls at the city of Niagara Falls, the water is led into great pits, where it drops on big wheels called turbines, and escapes through a two-mile tunnel under the city into the river *below* the falls. The revolving turbines put into motion great dynamos in the power



INTERIOR OF POWER HOUSE, NIAGARA.

house which make electricity. The power in this form is then distributed through wires to a distance of many miles and used in running factories, railroad cars, and other machinery.

Climate. — Another advantage which New York enjoys is a temperate climate, neither too warm nor too cold except on a few days in the year or in a few localities. The rainfall is moderate,

and well distributed both throughout the year and over the state.

Soil. — Again, a large part of the surface of New York has a fertile soil. This is especially true of the great valley regions along the Great Lakes,

ALLUVIAL PLAIN NEAR BINGHAMTON.



along the Hudson, Mohawk, and Genesee, about the Central Lakes, and at what is known as the Great Alluvial Plain of the Susquehanna River in the Allegheny Plateau, where the river has left a sediment of rich, fertile soil for miles around.

Minerals. — In the earth itself are large resources, such as iron ore, salt, petroleum, natural gas, granite, and marble.

Plants and Animals. — Again, let us consider the plant and animal life of the state. Before Europeans came to New York, dense forests covered the entire region. Chief of the trees is the pine, and in the Adirondacks large quantities of other evergreens — particularly the spruce and the hemlock. These are found, too, in other parts of the state, but mingled with hard-

woods. Especially plentiful are the oak, maple, hickory, chestnut, basswood, and elm. Of the larger wild animals, few have escaped the gun and trap. But small game, like rabbits and squirrels, and game birds still abound. Fish there are in plenty — in the fresh-water lakes and rivers, trout, bass, pickerel, and whitefish; and in the salt water, shad, bluefish, mackerel, oysters, and clams.

INDUSTRIES AND OCCUPATIONS

But all these resources would be worthless without the industry of man. It requires effort on his part even to catch fish or trap a wild animal.

All the different forms of effort which man makes to turn the resources of nature to his own use we call Industries. The chief of these are: Lumbering, Farming, Fishing, Mining and Quarrying, and Manufacturing.

Lumbering.—The people have been so active in clearing the land of trees that almost all of the useful timber has been cut down, except in the Adirondack region. In 1850 New York was the leading state in lumbering, but to-day it is outranked by about twenty states, and the wooded area is not



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LUMBERING IN THE ADIRONDACKS.

more than a third of the total area. However, lumbering is still an important industry, which thrives chiefly in the Adirondacks. Here, during the winter, when the lakes, streams, and marshes are frozen into firm roadways, the ax of the lumberman is busy, and the delightful summer camps on the green banks of lakes and rivers give place to the snow-bound lumbering camps, where the huge pine, hemlock, and spruce are felled and dragged to convenient storing places on the ice-bound rivers. When in the spring the ice begins to loosen and melt, and the streams swell into powerful torrents, the exciting and dangerous work of lumbering begins.



LOGS IN THE RIVER AT GLENS FALLS.

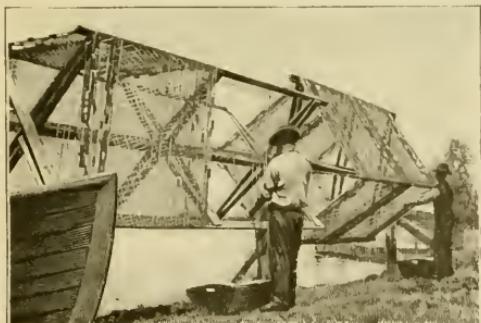
Agile and skillful lumbermen, armed with long poles, direct the floating logs in their course down stream, and many are the hairbreadth escapes and deeds of reckless daring told at the evening camp fires.

But it is necessary that a certain amount of forest land be allowed to remain, as it holds the rainfall and thus keeps up the water supply of the rivers. As the lumbermen in the past were frequently selfish and reckless in destroying the trees, the state government has acquired forest lands from time to time, so that now about 5000 square miles is owned by the state and known as the *Forest Preserve*.

Farming.—The farmer usually engages in both agriculture and stock raising. The fertile valley regions he uses for raising crops of grain, vegetables, or fruit, while the hills and rough places, which are not so good for agriculture, he uses as pastures for his cattle and other stock. Fully half of the area of New York is devoted to farming. There are over 200,000 farms, and they average each about 100 acres in area. The state is one of the leaders in agriculture, as in so many other respects. It ranks high both in crop raising and in stock raising. The farms of the state are valued at more than \$1,500,000,000, and their products in one year are worth a

seventh of this sum. The counties that lead in the value of agricultural products are St. Lawrence, Steuben, and Erie.

Fishing.—New York is excellently situated for the pursuit of fishing either as a sport or as an industry.



DRYING FISH NETS—LAKE ONTARIO.

Lakes Erie and Ontario, the St. Lawrence, the Niagara, and the inland rivers and lakes, the Hudson, and the salt water about



FARMING IN NORTHERN NEW YORK.

Long Island, all yield great quantities of fish. The Lake Erie fisheries are said to surpass those of any other body of fresh water in the world. Here fishing is done either from small boats, from the shore, or, in the winter, through the ice.

The state government has made laws fixing the times of the year when certain fish may be taken and the manner in which they may be caught, whether by line or net or spear. Fish

hatcheries are maintained, where young fish are raised and the waters of the state stocked with millions of them every year.

Mining and Quarrying.—Although New York is not known as a mining state, the following industries are important: mining for iron and a few other



SALT WORKS.

metals; quarrying for stone and other minerals; drilling for oil or natural gas; mining for salt or getting it from the great salt marshes.

Manufacturing.—But the products of all these industries are of little value until they have been manufactured into articles of use to us in our daily life.

Lumbering, mining, and quarrying lead to manufacturing. Of little use are the timber and boards until fashioned into

thousands of articles from a sheet of paper to a steamboat ; of little use is the iron ore until melted, refined, and shaped into its many forms from a needle to a locomotive ; of little use is the marble until converted into its countless products from a paper weight to a city hall. Even fishing and farming lead to manufacturing. Fish are salted and preserved as food, or their oil is extracted. Grains are ground to flour, vegetables and fruits are dried or canned, hops are used in making beer, and tobacco is made into cigars ; and from live stock are produced butter, cheese, condensed milk, and even canned meats, leather, and buttons.

New York stands far in the lead in the matter of manufactures. The total value of the products is so great that an exact statement of the number of dollars would give no idea of it, as it reaches far up into the billions.

Occupations.—While the industries just described employ a great number of the people of the state, it must be remembered that certain other occupations are necessary in any civilized community. So that we find here a great army of lawyers, doctors, ministers, teachers, engineers, journalists, clerks, railroad men, and others.

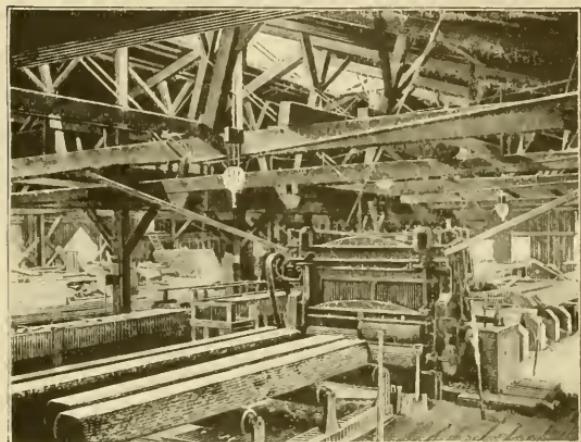


OLDEST SAWMILL IN THE STATE.
BUILT IN 1805.

PRODUCTS

Let us now consider the products of each of these industries in turn.

Forest Products.—The forests in New York yield products which in a single year reach a value of about \$10,000,000.



INTERIOR OF A MODERN SAWMILL.

Products of the sawmills and planing mills go to the hands of the builder or the manufacturer.

Agricultural Products.—Among the leading groups of agricultural products are the *cereals*. In the production of buckwheat New York has first place, raising over a third of the total crop of the United States. Great quantities are produced throughout the Allegheny Plateau. In the value of the rye crop, which comes largely from the Hudson Valley counties, there are only a few states that outrank New York. Oats, wheat, and corn are also produced in large quantities. Another group of

The trees, as hewn and trimmed by the ax of the woodman, are taken to the sawmill where they are further trimmed into beams, sawed into boards, planed into various forms, or cut into shingles, or into hoops, staves, and headings for barrels. The prod-

important products is the different kinds of *hay*. Iowa is the only state that yields a larger amount than does New York.

As to *vegetables*, nearly a tenth of the entire United States crop is raised in New York. New York has first place in the production of potatoes,



A VEGETABLE FARM.

onions, sweet corn, turnips, green peas, cabbages, and several other varieties.

Almost a third of all the hops in the United States comes from New York, and this state supplies also a small part of the tobacco crop. The maple, in addition to furnishing a valuable timber,

is raised for its sap to such an extent that New York produces more maple sugar than any other state except Vermont.

In the raising of *fruits*, New York is second only to the famous fruit state of California, and in the raising of apples it holds first rank. Millions of pounds of fruits are evaporated for the market,



GATHERING GRAPES.

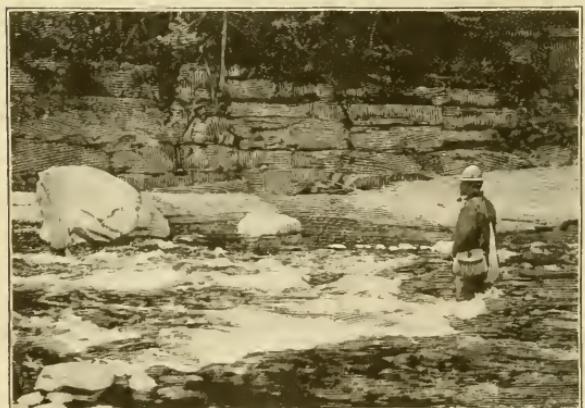
and cider and vinegar are among the important products of the state. The counties bordering on the Ontario are famed

for their orchards, and grapes and other small fruits are raised in enormous quantities.

Agriculture includes, too, the cultivation of fruit trees, plants and trees for ornamental purposes, and the raising of farm and garden seeds, and here also New York is the leader. the lower Hudson and Long Island counties selling nearly \$3,000,000 worth of nursery products annually. Near the city of Rochester are nurseries, said to be the largest in the United States.

Live Stock.—We have seen that the farmer finds it profitable to devote his hilly or rough land to stock raising. In a single year the farmers of the state have sold about \$30,000,000 worth of live animals. In the value of the manufactured dairy products—condensed milk, butter, cheese—New York is a leading state. Enough milk is produced in a year to supply

every person in the state with more than a hundred gallons. In poultry raising the state has high rank, and in the culture of bees it is surpassed only by California in the value of its honey and wax.



TROUT FISHING.

Fish.—The chief products of the fishing industry are herring, sturgeon, trout, whitefish, catfish, pike, and perch, from the border waters; trout, bass, pike, perch, and pick-

erel, from the inland waters; shad from the Hudson; and in the salt water about Long Island are captured great quantities of bluefish and mackerel: menhaden are caught off the eastern shore; and the bays are worked for lobsters, oysters, and clams—the famous Blue Point oysters come from the vicinity of Blue Point on the Great South Bay.

Minerals.—As to the mining industries, iron is the only metal found in any quantity. Fine iron is mined in the Champlain district, in the Highlands, and at various scattered points in other regions.

In quarrying, over \$7,000,000 worth of building stone was taken out in 1913. Granite is found throughout the



A BRICKYARD.

Hudson region, marble in the northern and eastern counties, and bluestone in Ulster. The hard sandstone from Potsdam is used for paving. The only place in the country where red slate is found is Washington County. Limestone is found in nearly every section, and clay is widely distributed, so that cement is made in many counties. Along the lower Hudson large clay beds have developed important brick-making industries.

Petroleum is found at many places, chiefly in Allegany and Cattaraugus counties. From Olean the oil is pumped through pipes to distributing points as distant as Buffalo and Long Island City. Natural gas is found in the central and southwestern

parts of the state, and is used in Buffalo and other places for lighting, cooking, and heating.

In the production of salt, New York has long held first or second rank. Salt springs of value are in Onondaga, Wyoming,

and Genesee counties; and in recent years rock salt has been mined in Livingston County.

Mineral springs, valuable as medicine, are found throughout the state, some of the best known being those

CONGRESS PARK, SARATOGA SPRINGS.

at Saratoga, Richfield, Sharon, and Avon. The village of Saratoga Springs, located two or three miles from the Hudson, is the most famous watering place in the United States. Its population of 13,000 is greatly increased during the summer months by visitors to the hotels, attracted largely by the wonderful mineral waters.

Manufactured Products.—

The products of manufacture are almost countless. The leading branch is the manufacture of textiles, the products of which exceed a fifth of the entire manufactures of the state. The



VIEW IN SARATOGA.

manufacture of food and like products comes next in importance, followed by what are known as "hand-trade" products. In the manufacture of metals other than iron and steel, New York is the first state, and in this connection it is interesting to note that New York's production of confectionery is now greater than that of iron and steel. The state is first also in the manufacture of lumber products, of chemicals, of liquors and

beverages, of tobacco, of paper and printing, of gloves, millinery, carpets and rugs, and electrical machinery and apparatus. Very extensive, too, are its shipbuilding, and its manufactures of clay, glass, and stone, of leather, and of vehicles.



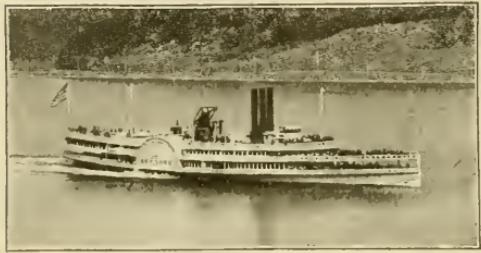
SARATOGA LAKE.

COMMERCE

It is not enough that the different industries shall take the resources of the earth and change them into useful products. These products must next be *exchanged*, so that each person may work at his occupation and trade off his products for other things which he needs but does not make himself. This exchange we call Commerce, and here, too, nature has done much for New York in determining the routes by which merchandise of various kinds can be most easily transported from one point to another.

Modes of Transportation.—We have noticed that the state is cut in many directions by valleys, which are of the greatest importance as routes of travel. Along these lines the exchange of farm products for the products of the factory, and the products of one town for those of another, has been made for years and years. Roads were early built, that men and produce might

travel horseback or in wagons. Steamboats were run on the navigable waters. Then in some cases where the rivers could not be used for purposes of commerce canals were built. Later came the "iron horse," ready to haul along

A black and white illustration of a large Hudson River steamboat. The boat is long and narrow, with a prominent funnels and several decks. It is moving through choppy water, with small waves visible. In the background, there are hills or mountains under a clear sky.

A HUDSON RIVER STEAMBOAT.

steel rails great numbers of wagons or cars at a speed far greater than ever before attained.

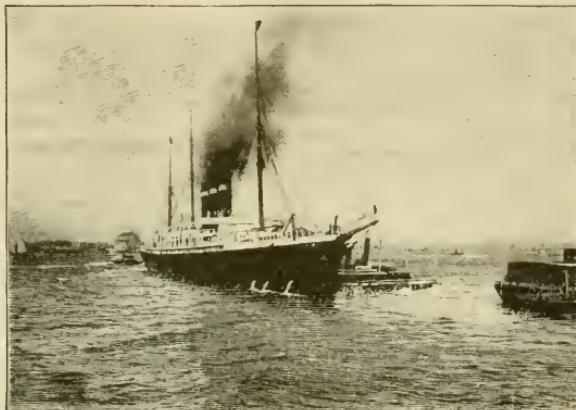
Routes of Transportation.—One feature of New York's surface gave the state a great opportunity to grow in commercial strength. Year by year the American colonists pushed their settlements farther and farther into the great West and Northwest. Year by year their products increased until they had more than they could dispose of near at hand. Then, naturally, they sought the chance to trade with the people of the Atlantic Slope, and even with the European nations. To carry on this export trade it was necessary that in some way their products should reach the Atlantic coast. Many seaboard towns with their excellent harbors—Boston, New York, Philadelphia—were good ports when once reached; but how to reach them?

For hundreds of miles there was no break in the Appalachian Highlands through which the loaded wagons might be sent to the coast, but well toward the northern end there was the cut formed by the St. Lawrence and Mohawk valleys. Once through this opening, to the right, lay the navigable Hudson, inviting commerce to its mouth port, — New York. Thus New York city became the great American port, and New York state the commercial leader of the Union.

Roads. — The means by which commerce has been carried on are the waterways — natural and artificial — and the roadways, either open roads or railroads.

In the construction of roads for ordinary use great progress has been made. At first, a road was hardly more than a widened trail through the woods, but from that small beginning has gradually come the miles of well-built roads that to-day are found all over the state. Especially as the bicycle and automobile have come more and more into use, the greater has been the need for smooth and lasting roadways, so that the length of these improved roads is daily increasing.

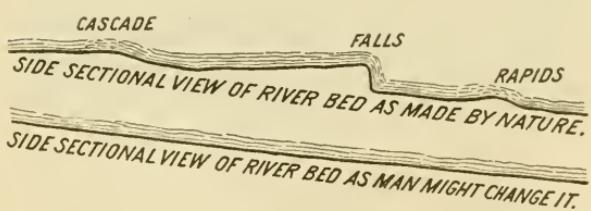
Water Routes. — The easiest kind of route for man to establish is a boat line, for nature has provided the “roadbed,” as it were,



AN OCEAN STEAMER.

and man has only to furnish the vehicles. Steam, of course, is almost entirely used to-day as the motive power, and so we find steamboats plying regularly on all of the important inland and border rivers and lakes. The great shipping center, not only of New York state, but of the western hemisphere, is the port of New York city. Thence the vessels go out to the north, the east, and the south. Many of the steamboats are of great size and speed and as comfortably and richly furnished as any hotel.

Canals. — We have already remarked that many of the valleys are traversed by unnavigable streams. While large boats may readily sail up the Hudson, their farther progress — up through the Mohawk Valley — is made impossible by the shallowness of the Mohawk River and its rapids and falls. Again, even if this river were navigable, there are many breaks in the chain of rivers and lakes as you cross the state. Large ditches might be built to connect these, you may say. Yes, but they could not be laid out across entirely level country, and they would soon become

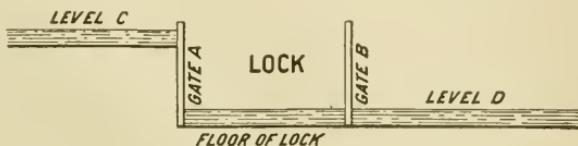


rapid-flowing rivers. Even were a river bed dredged and the river thus deepened and the falls cut out, it would still remain

unnavigable on account of the swiftness with which the water would flow. Thus it was necessary for man to devise some kind of artificial river, on the plan of a large ditch, and to find some method by which boats could be taken easily from one level to another. What he did contrive was a form of "lock."

by which a boat as it stands in the water can be raised or lowered from level to level—made, in fact, to go uphill or downhill. If you study carefully the following description, you can understand how this is done.

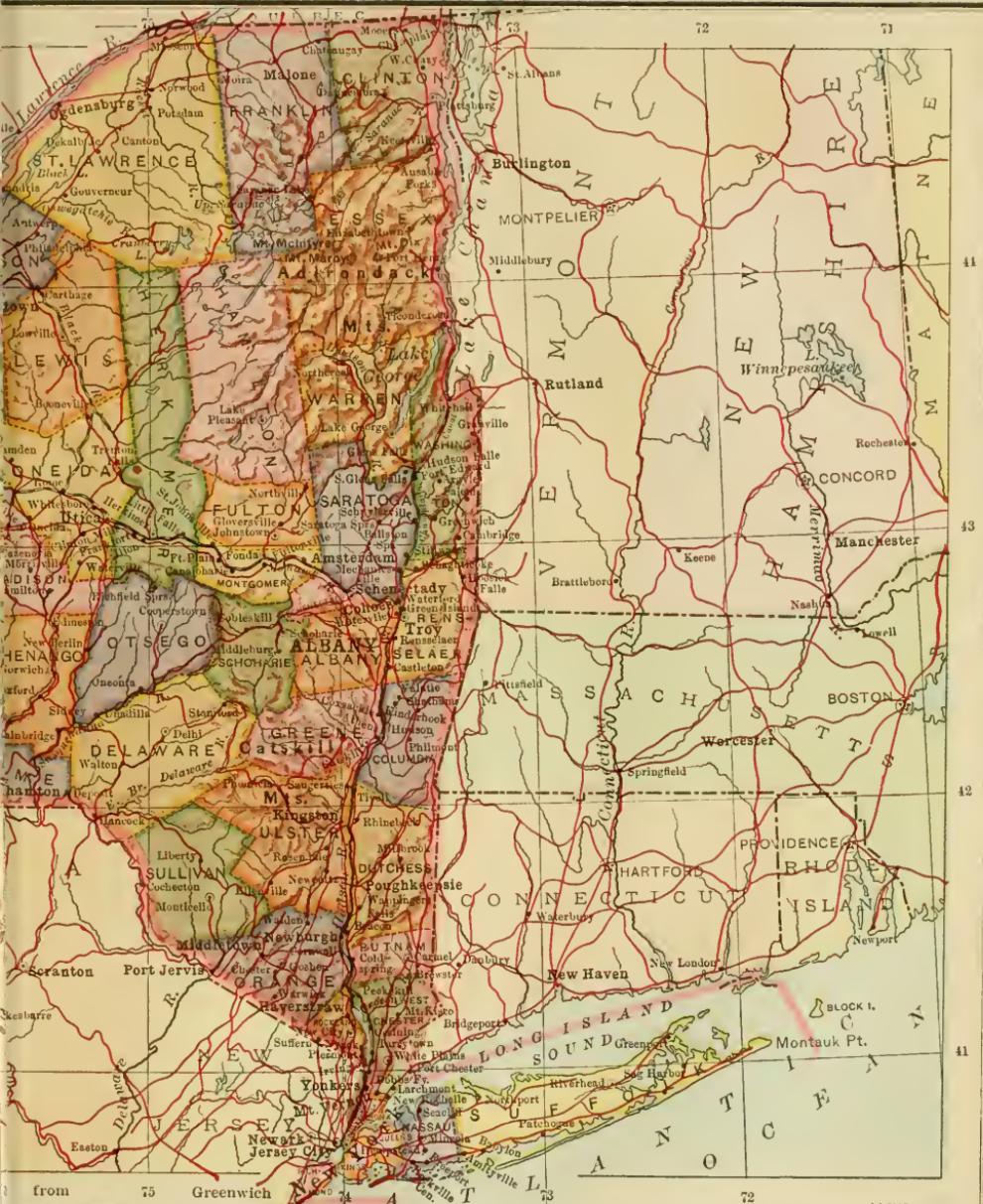
If a boat is to be taken from level C to level D (downhill), gate B is closed; water from level C is admitted until it stands in the lock as high as it does on level C; gate A is opened and the boat floated into the lock; gate A is closed; the water in the lock is let out gradually into level D, so that it falls slowly to the level of that in level D; gate B is opened; the boat now passes out on level D and is drawn on until another lock is reached.



CANAL LOCK, LITTLE FALLS.

It was on April 15, 1817, that the legislature of New York, under the leadership of Governor Clinton, voted to build the Erie





Canal, from Albany to Buffalo. In spite of the ridicule which greeted the "Big Ditch" on all sides, it was completed by October 26, 1825. Since then the Erie Canal has been used constantly except during the winter, when navigation is closed. It fixed the path of commerce from the West through the state of New York, and made the city of New York the chief port for foreign shipment. In addition, many thriving towns have been developed all along the route of the canal. From time to time the canal has been improved in many respects. The original length of 363 miles has been reduced to 353; the number of locks from 83 to 34, and the canal and locks have been enlarged several times so that larger boats may be used.

The last and greatest improvement, undertaken in 1903-1916, transformed the Erie Canal into the main part of the New York State Barge Canal, which includes also three other branches: the Oswego, the Champlain, and the Cayuga and Seneca canals. In this reconstruction of the Erie and other canals the routes were changed so as to use lakes and canalized rivers for long distances. The improvement cost more than \$125,000,000. Rochester and Syracuse, left off the new route, are reached by short branches.



FIRST RAILROAD TRAIN.

A smaller canal, also built by the state, connects the Black River with the Mohawk at Rome.

Railroads.—Within six years after the completion of the Erie Canal the first railroad in New York was run between Albany and Schenectady. The building of railroads has continued since then, and to-day over

8500 miles of steam roads are operated in the state. The roadbed and rolling stock have been greatly improved. One may now board a train at one end of the state in the morning and arrive at the other before evening; throughout the entire trip, during which he has had at his command the comforts of parlor and dining room, he need not leave his train.



Through courtesy of N. Y. C. & H. R. R.R.

A MODERN RAILROAD TRAIN.

The chief railway systems of New York are: the New York Central and Hudson River, operating over 2000 miles of road in the state; the Erie, with about 900 miles; the Delaware and Hudson, the Lehigh Valley, the Delaware, Lackawanna, and Western, the New York, Ontario, and Western, the West Shore and the Long Island,—ranging from about 700 to about 400 miles.

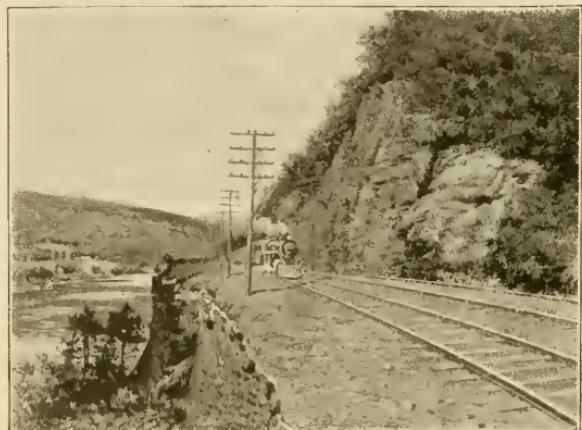
It will be seen that the same natural routes which have been used by canals have been used by the railroads, and that the railroads generally follow the valleys. Man has not, however, followed these highways of nature altogether, but has daringly laid his iron rails *across* the mountain ridges, cutting through the mountains and building long bridges over the valleys between.

The main line of the New York Central follows the east bank of the Hudson from New York city to Albany. Here it turns westward through the Mohawk Valley and follows very closely the route of the Erie Canal to Buffalo. Other lines reach many other parts of the state.

The West Shore runs along the west bank of the Hudson, and from Albany to Buffalo along a route about the same as that of the Central.

The Lehigh Valley and the Delaware, Lackawanna, and Western extend from New York to Buffalo by routes that lie partly in New Jersey and Pennsylvania.

The Erie, completed in 1851, is a wonderful piece of engineering work. Its original western terminus was Dunkirk, on



VIEW ON THE ERIE RAILROAD.

Lake Erie. It now runs west to Chicago, and has branches to Buffalo and many other points. If you follow the Erie from Jamestown, a handsome city on Lake Chautauqua where the road makes its western connections, and continue to New York,

you will notice how it has to cross all five of the river systems of the state, and yet how it does this almost entirely by following up or down the river valleys. First it travels up the Allegheny (Mississippi system), then down a branch of the Genesee (St. Lawrence system), then up the main stream, and finally up an eastern tributary, passing out of the Genesee Valley, at an altitude of nearly 1800 feet, into the Susquehanna system, by way of the valley of the Canisteo River. Next it goes down

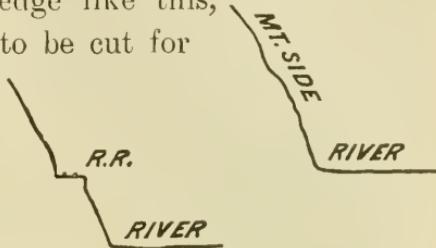
the Chemung, then up the Susquehanna, then crosses the divide into the Delaware watershed, following very closely the Delaware River for the entire length of its boundary between New York and Pennsylvania. At Port Jervis the road turns eastward to climb over the Shawangunk Mountains down to the valleys of the Hudson River system. In many cases, where the mountains come down to the river's edge like this, the roadbed for the railroad had to be cut for miles out of the solid rock, thus

The New York, Ontario, and Western follows the tracks of the West Shore from Weehawken to Cornwall. From here it strikes northwest to Oswego.

The Delaware and Hudson extends from Binghamton and the coal district of eastern Pennsylvania to Albany, Rutland in Vermont, and Montreal, with branches to many famous summer resorts.

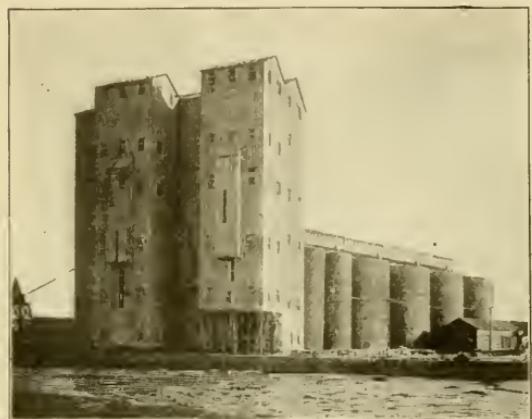
The Long Island Railroad runs from Brooklyn, in New York city, throughout the length of the island along both the north and south shores and also through the middle of the island.

The last few years have seen great progress in the use of electricity, which has taken the place of horses as power for street railroads, and replaced steam for local travel between neighboring towns. About 3000 miles of such roads are operated in New York. In some cases the power is led through underground wires, in others by overhead wires, and in others, mainly on elevated street railways, by a third rail alongside the tracks.



MANUFACTURING CENTERS

In New York, as in every other state or country, the people have gathered themselves together into villages or into cities, which are really only villages of a larger growth. In some cases this is because these particular places were better fitted for carrying on manufacturing; in other cases because they made good centers for trade.



GRAIN ELEVATOR, BUFFALO.

All of the cities and many of the villages now are both manufacturing and commercial centers. But most of them owe their first growth to one only of these causes. The cities of New York are listed on pages 129-130. In order of their rank as manufacturing centers the leading

ten are: New York, Buffalo, Rochester, Yonkers, Syracuse, Schenectady, Troy, Utica, Niagara Falls, Albany. *New York*—by far the greatest of these—is studied in the second half of this book.

Buffalo, at the western end of the state, has immense manufactures of iron, steel, brass, and copper goods, machinery, lumber, oil, flour, sugar, beef, leather, shoes, etc. Slaughtering and meat packing are extensively carried on. Near Buffalo are the manufacturing cities of *Niagara Falls* (with large chemical works), Lockport, North Tonawanda, Tonawanda, and Lackawanna.

Rochester, too, has many millions of dollars invested in manufacturing, over a third of which is in the manufacture of photographic supplies, boots and shoes, and men's clothing. Flour, beer, tobacco, and furniture are among the other products.

Syracuse not only has high rank as a manufacturing city, but it is rapidly growing. Men's clothing, automobiles and other machinery, manufactures of iron and steel and malt liquors are the leading products. Auburn, to the southwest, and Oswego, to the northwest, are both important manufacturing cities.



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SALINA STREET, SYRACUSE.

Between Syracuse and Troy are the cities of Rome, Utica, Little Falls, Gloversville, Johnstown, Amsterdam, Schenectady, and Cohoes, all important centers of manufacture. In *Schenectady* the chief manufactures are electrical machinery and steam locomotives. *Utica* manufactures textiles and other goods.



A COLLAR SHOP, TROY.

Troy and *Albany* are extensive manufacturers of machinery, mathematical instruments, and shirts, collars, and cuffs.



A STREET IN ITHACA.

Between Albany and New York are the cities of Hudson, Kingston, Poughkeepsie, Newburgh, Yonkers, and Mt. Vernon, all engaged in manufacture. *Yonkers* has large sugar refineries and carpet and rug factories.

In the south central part of the state is a group of manufacturing cities, including Ithaca, Hornell, Corning, Elmira, and Binghamton. The last two are the most important and have large flour mills, rolling mills, tanneries, breweries, iron works, car shops, and factories of many kinds.

COMMERCIAL CENTERS

We next consider the cities as commercial centers. The leading lake ports are Buffalo and Oswego. Buffalo is called the "Queen City of the Lakes"; for not only is it one of the most important cities of all the Great Lakes, but, with its broad, well-paved, and beautifully shaded streets, its many artistic residences, its well-kept lawns, its substantial public buildings, and its system of public parks, it is one of the handsomest cities of the northern country. It has a water front of seven miles

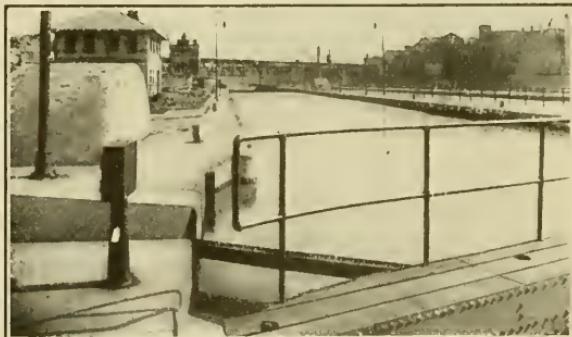


NORTH STREET, BUFFALO.

on lake and river, and its harbor, protected by breakwaters, is one of the finest on Lake Erie. As a lake port, as one terminus of the Erie Canal, and as the junction of a score of railroads, it has an immense trade, especially in live stock, coal, and lumber. Grain is brought in enormous quantities from the West and stored here, and later reshipped to its final destinations.

Dunkirk, also a manufacturing city, has a large Lake Erie trade.

Oswego is the chief port on Lake Ontario. It has an excellent harbor, protected by a large breakwater, and has miles of wharves and many large grain elevators. It has a large trade with Canada in lumber and grain and in coal, which comes across the state from Pennsylvania. Its importance dates back to the days of the French and Indian War, when the English fort was captured, in 1756, by General Montcalm.



CANAL LOCK AT OSWEGO.

All the cities along the line of the Erie Canal and the Central and West Shore railroads are important trading centers. The Mohawk Valley is famous as a dairy region, and besides its immense exports of butter and cheese, hops and broom corn are raised in large quantities. To the west is the great grain and fruit producing region about the Finger Lakes and the Great Lakes. The products of the farms for miles around are brought

to the cities, where they are shipped by canal or railroad just as they are, or after they have been manufactured into other products.



LOWER FALLS, ROCHESTER.

Rochester is on the Genesee River, not many miles from its mouth, on Lake Ontario. The city is connected by a branch of the Pennsylvania Railroad with the plateau region to the south, so that Rochester is the center of trade for the whole Genesee Valley.

Syracuse is a railroad center, and is connected

with the Erie Barge Canal by Onondaga Lake.

Rome is an important market for cheese and lumber.

Utica, beautifully located on a slight elevation, is the metropolis of the Mohawk Valley and a busy railway and canal center. It is the most important cheese market in the United States.

Schenectady is another railroad center in the Mohawk Valley. It is the largest city between Utica and Al-



MAIN STREET, ROCHESTER.

bany, and its commercial importance is increasing with its rapid growth in manufactures and in population.

Albany, the capital city, with its population of 100,000, is located a few miles below the mouth of the Mohawk and the junction of the Erie and Champlain canals, near the head of the Hudson River navigation. It is connected by rail with New York, Boston, Montreal, and Buffalo, and has always been a city of great commercial importance. It is the greatest lumber market in this part of the country. On the opposite bank of the Hudson from Albany, connected by a railroad bridge, is the city of Rensselaer, formerly East Albany.



GOVERNOR'S RESIDENCE, ALBANY.



THE POUGHKEEPSIE BRIDGE.

Troy has excellent commercial advantages, connected as it is by canals with Lakes Champlain, Erie, and Ontario, and located near Albany and its railroad systems. Opposite Troy is the city of Watervliet, where the lumber trade is the chief industry. At Watervliet is located a United States arsenal.

At *Poughkeepsie*, an important railroad junction, the Hudson is spanned by an immense bridge. Trains passing over

this bridge connect the Pennsylvania coal region with New England.

Newburgh is one of the leading commercial cities on the river, dealing in the produce of the rich farm lands to the west.



WASHINGTON'S HEADQUARTERS AT NEWBURGH.

Newburgh is connected by ferry with the city of Beacon.

The most important of the many railroad centers of south central New York are *Binghamton* and *Elmira*, trading largely in flour, lumber, and coal.

ADVANTAGES OF LOCATION

But it must be remembered that good reasons fix the location of all cities, and that they do not grow up at random. Even if you did not know that there is a city called Buffalo, as soon as you had learned of the Great Lakes and the many people that live near and beyond them, and of the remarkable valley that extends from Lake Erie across New York to the

In Newburgh is located the Hasbrouck House, famous as the headquarters of Washington during the last years of the Revolution. Many relics of the War of Independence are to be found in the house and on the surrounding grounds, now preserved as a state park. New-

Hudson River, you would expect to find a large city on the lake at the head of the valley. And, further, you would expect to find it at that point on the lake shore which has the best harbor for trading boats.

Again, we have seen that in the Genesee River are great falls which can be used to run machinery. And at this point on the river has grown up the city of Rochester.

The city of Syracuse owes its first growth to the salt springs in the neighboring marshes which were known to the Indians, it is said, as far back as 1653.

These cities and those of the Mohawk Valley all owe their later rapid growth to the building of the Erie Canal and then to the railroads, which enabled them to ship their products to distant markets and to develop into great commercial centers.

Many other centers owe their manufacturing importance to waterfalls — among them, Niagara Falls, Cohoes, Glens Falls, Little Falls, Fulton.

Then there are the cities on the Hudson. Kingston, for example, is the most convenient point at which the bluestone from the quarries to the west can be taken and shipped down the river. Large quantities of ice taken from the Hudson are shipped from this port. Again, Kingston is the natural southern



COHOES FALLS.

gateway to the popular Catskill Mountain region, and so it gains prominence as a railroad center.

At the junction of the Chenango and Susquehanna rivers, in the center of that fertile alluvial plain, there could not fail to grow up a town of importance as a manufacturing and trading center — Binghamton.



BINGHAMTON.

These instances are enough to show you that cities do not spring up by chance. In every case, the large city has had some great advantage of location — near powerful waterfalls, near natural waterways, or perhaps at the junction of two of them, or at the central point of an extensive farming district, or near natural resources.

SOCIAL DEVELOPMENT

The Early Settlers. — Think of the early settler in New York as he pushed into the woods, cleared the trees off a little tract of land, built a log cabin, and became farmer, fisherman, quarryman, and manufacturer, all in one. He and his family raised their own grain, vegetables, and fruit; they trapped game, caught fish, raised stock; they made their own cloth and manu-

factured their own clothing and whatever else they needed in their daily life. Soon, however, others settled near them, and then each man began to devote himself to doing the thing he was best fitted to do. If he could shoe horses, he set up a blacksmith shop; if he could make clothes, he set up a tailor's shop; if he was a miller, he built a mill at a convenient waterfall, and ground into flour the grain which the farmers brought him. Others devoted themselves to carpentry, others to masonry, others to manufacturing of one kind or another.



LOG HOUSE.

Naturally these different people grouped themselves together in a village, and then was established the village store, where one could make a great variety of purchases—an iron pail, a lace handkerchief, dried fish, or a box of axle grease.

The doctor and the minister and the lawyer settled in the village, and schools and churches were built. Before many years elapsed, the little village grew to a large town, or perhaps, if it was fortunately located so that railroads or waterways made it a commercial center, it became a great city.

Country Life.—All this while, many other people preferred to remain in the country, making their living as farmers, so that to-day, within the state of New York, we find miles after miles of rich farm land and again hundreds of cities and villages.



MODERN FARMHOUSE AND BARNs.

And how different is the farm life from that of the city! The boy who lives on the farm gets up very early,—perhaps at four o'clock in summer,—helps with the "chores," milking the

cows; feeding the horses, cattle, pigs, and chickens and other live stock; fetching water from the well or spring, carrying it by the pailful several rods to the house; and bringing in great armfuls of firewood. The farmer's family, with perhaps a "hired man" or two, are the only persons living in the good-sized,

two-story house, and the nearest neighbor is probably a quarter of a mile away—often farther. After breakfast, the boy, with



A COUNTRY SCHOOLHOUSE.

his lunch pail in hand, will trudge a mile or so to school. The schoolhouse is a one-room frame building, and if there are twenty pupils present, it is considered a large attendance. If the country boy wishes to mail a letter or get any mail which may have been sent him, he often has a long walk or ride to the nearest village post office. If he goes out for the evening, unless it is a bright moonlight night, he will have to carry a lantern or fasten one on his carriage or sleigh. But he usually gets to bed early so as to rise the next day with the sun.

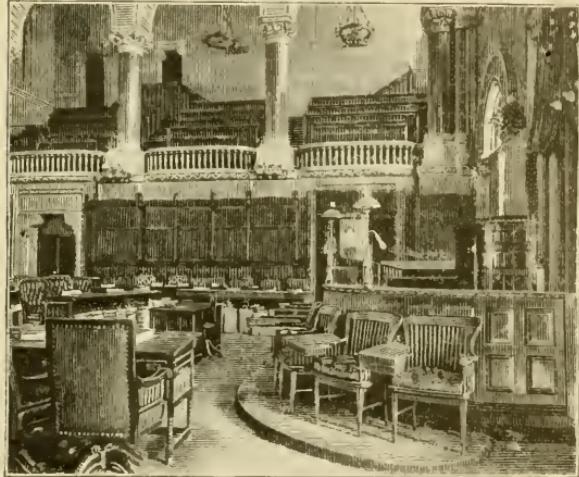
City Life. — What a different story is the life of the city boy or girl, who lives perhaps in a house not more than twenty feet wide, with other houses close up on each side, and maybe with a back yard some forty feet long, or else in an "apartment" or "flat" house where from three to a dozen families all live. In this case each family has some half-dozen rooms where its daily life is carried on. The city boy's "milking" is not more than going to the front door and taking in the bottle or pail of milk which the milkman left there; there is no fetching water, because the city reservoir supplies every house; there is probably no firewood to bring in, because coal or gas is generally used as fuel. And so the city



AN APARTMENT HOUSE.

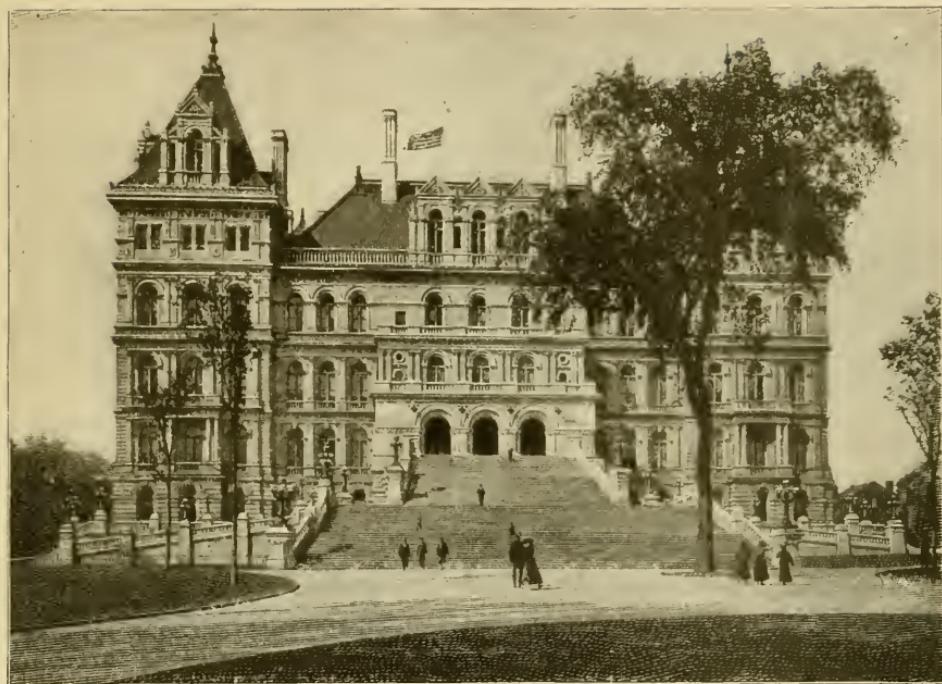
boy has few "chores," and he does not get up so early as his country cousin. The school which he attends may be but a few rods away — a four-story building of brick and stone with 2000 or more pupils in daily attendance. Living so near the school he can go home to his lunch. If he wants to call on his friends or go "down town" to the large shops, he can go by street car, electric or cable, or perhaps by an elevated road or a "subway." If he goes out at night, he finds the streets well lighted with public lamps, and there are many places of amusement open every evening. His letters are brought to his house by a letter

carrier, who makes several trips a day, and to mail a letter requires but a few steps to a letter box.



THE SENATE CHAMBER AT ALBANY.

GOVERNMENT
In every government a few of the people are selected to make laws for the good of all and to see that those laws are obeyed. The government of the state of New York, like that of the United States, has three branches. First, there is a legislative branch consisting of a Senate of 51 members and an Assembly of 150 members, elected by the people of the various districts into which the state is divided. The legis-



THE STATE CAPITOL.

lators make the laws for the state. Second, there is the executive branch, consisting of a governor and other state officers who are elected by all the people of the state. The governor, who appoints many assistants, sees that the people obey the laws. Third, there is a judicial branch, consisting of judges and other officers of the courts, all of whom are elected by the people. The duty of these is to settle disputes about the laws, and also to punish people who break the laws, thus administering justice to all the inhabitants of the state.

Besides this state government, each county has a government to look after matters which relate only to its own county.

— a board of supervisors for law-making, a sheriff and other officers for law enforcing, and county courts for law judging.

As each county is divided into towns, there is another set of officials to attend to the matters of purely town government, and in the same way each of the cities of the state has a city government.

The headquarters of the state government is in the capitol building at Albany. This magnificent granite structure, located on the principal height of the city, is visible for miles around.

EDUCATIONAL CENTERS

One of the causes of the importance of New York state is the attention given to education.

To-day not only has every child an opportunity of getting a free schooling, but he is compelled to go to school whether he and his parents wish it or not. Sixty-five million dollars is spent upon public education every year. Throughout the state are more than eleven thousand coun-



COLUMBIA UNIVERSITY.

try schoolhouses. In the larger villages there is usually what is known as a Union School, which contains a high-school department. In the cities, boards of education make laws and requirements suited to the needs of the local schools.

Besides these, there are the colleges, most of which are private institutions, in which the students pay for their instruction. When a student graduates from a college or university he receives a diploma on which is written the degree or standing which he has attained. In New York there are over thirty colleges that confer degrees on their graduates.

Of these colleges, Columbia University, organized as King's College in 1754, the largest in the state, is situated on Morning-side Heights in New York city. New York University, organized in 1831, situated on University Heights, and the College of the City of New York, organized in 1848 as the New York Free



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CORNELL UNIVERSITY.

Academy, are the next in size and importance in New York city. Cornell University, beautifully located at Ithaca, on Cayuga Lake, is the second college of the state. Poughkeepsie is the seat of Vassar College, one of the leading schools in the United States for the education of women.



VASSAR COLLEGE.

There is at Albany the State Normal College which prepares its pupils to become teachers, and eleven normal schools at different points throughout the state carry on the same work.

At West Point, commanding the Hudson to both north and south, is the United States Military Academy, which is governed



UNITED STATES MILITARY ACADEMY, WEST POINT.

located the State Museum and the State Library, containing thousands of volumes. There are many other large and important libraries, all of which, together with museums and other opportunities to increase one's knowledge, do their great work in the education and refinement of the people.

This study of our state, though brief, will serve to show how well New York merits its proud title of Empire State.

by the War Department of the United States. Here young men are trained to become army officers, and each graduate receives a second lieutenant's commission in the regular army.

But schools are not the only educational institutions. At Albany are

THE CITY OF NEW YORK

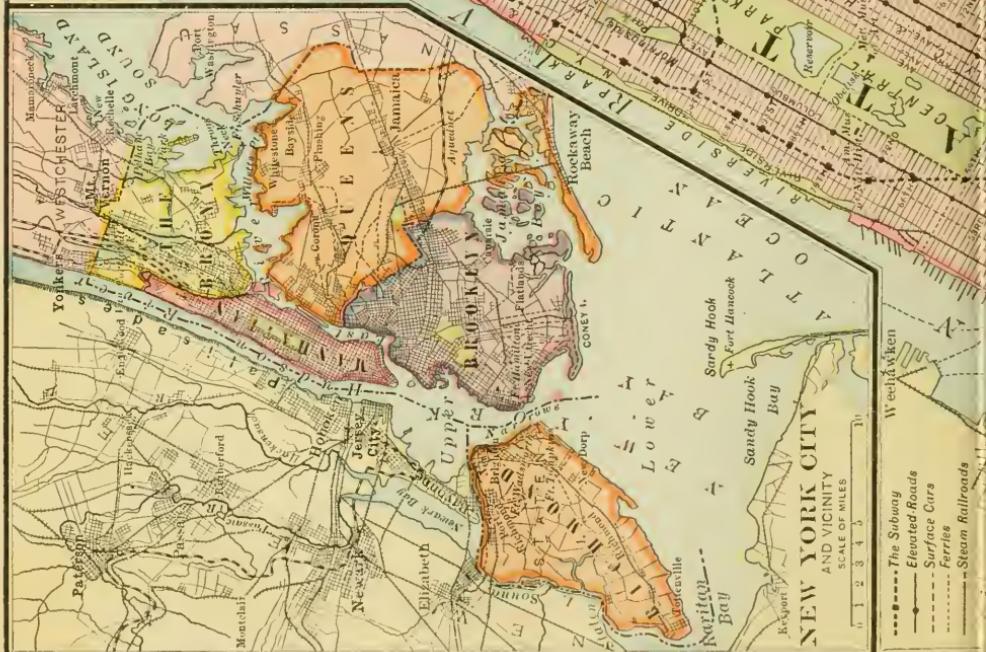
INTRODUCTION

THE city of New York is divided into five boroughs.

The borough of **Manhattan** includes all of Manhattan Island, whose northern boundary is the Harlem River. It includes also Governors, Bedloes, Ellis, Oyster, Blackwells, Randalls, and Wards islands. The borough of **The Bronx** lies north and east of Manhattan and extends to the northern limits of the city. The borough of **Brooklyn** covers the area of Kings County, and is the old city of Brooklyn. It is surrounded by the East River, the borough of Queens, New York Bay, and the Atlantic Ocean. The borough of **Queens** extends from Brooklyn to Nassau County on the east. The borough of **Richmond** comprises all of Staten Island.

The city of New York is governed by a mayor, who is assisted in each borough by a borough president.

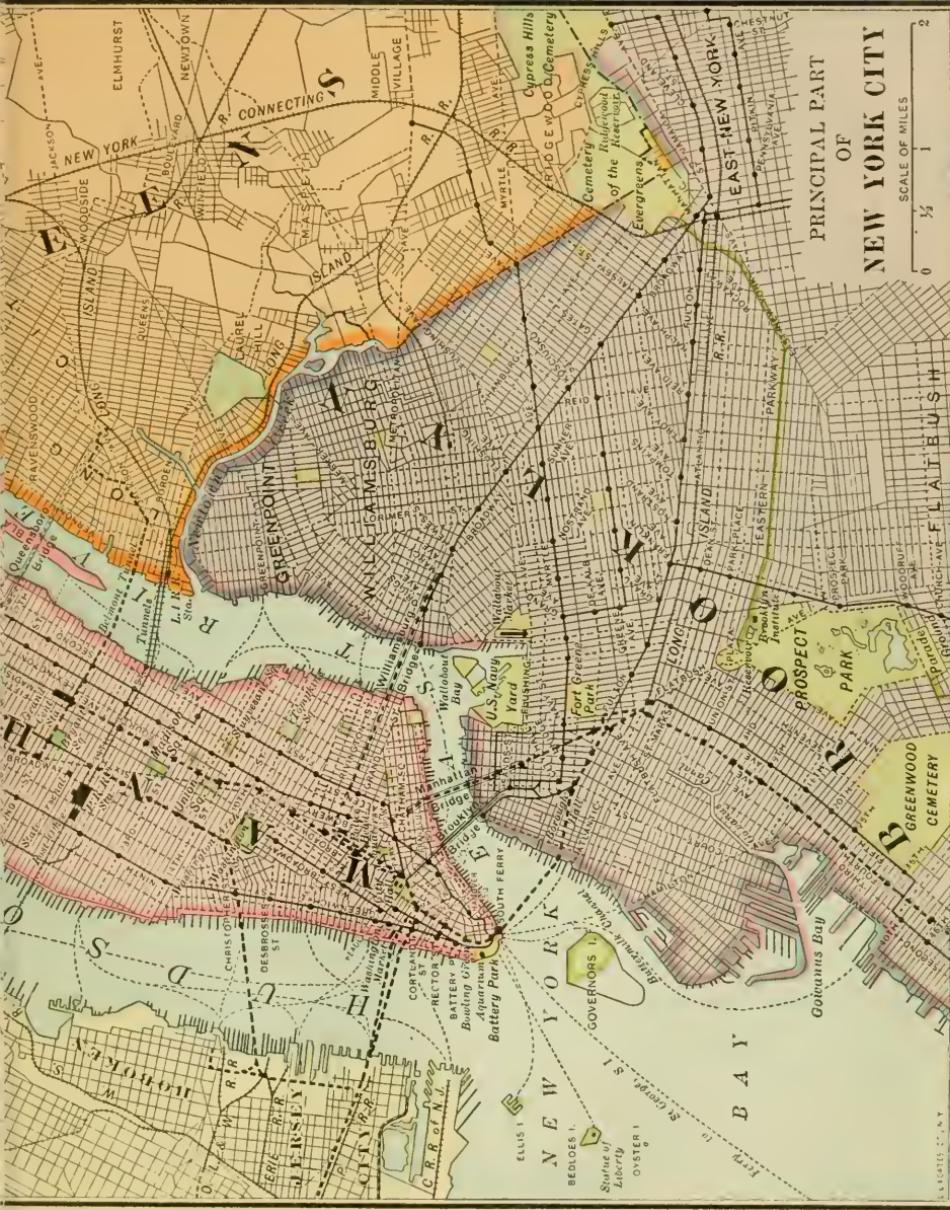
The area of the city is 318 square miles, of which the largest borough, Queens, covers 124 square miles, and the smallest, Manhattan, 20 square miles. The vast city has 5,047,000 people, nearly half of whom are in the little borough of Manhattan. Richmond has the smallest population, although it outranks in area both the borough of Manhattan and the borough of Brooklyn.



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NEW YORK CITY

PRINCIPAL PART



NEW YORK CITY AS AN INDUSTRIAL AND COMMERCIAL CENTER

Although we generally think of New York as a city chiefly devoted to trade or commerce, we must not lose sight of the fact that it is a great industrial center as well.



LOADING GOODS FOR EXPORT.

more and more of the old farms in the outskirts of the city giving place to the real city life and to those industries that are more common in a great city. The most important of these industries is manufacturing, and it is due to this especially that New York leads as an industrial center. When we consider that in manufacturing, New York is the leading city of the world, we have one of the best standards by which to measure its greatness. This alone would lead to a vast commerce; for we must dispose of the manufactured products, and so we send them by land and by sea to all parts of the globe. These we call our exports, and in

Of course the industries common in the rural parts of the state are not found here to any great extent, although it is true that within the limits of the city of New York we do find good fishing, and even some farming is still done. But every year sees

the total exports of New York city we must include those goods that come through it from the north, the south, and the west, bound for foreign lands. The commerce of the city includes also the great import trade, goods brought in ships to New York from foreign ports, some of it to remain there and some to pass through on the way to the inland cities of the United States. These imports are taxed by the United States government, which has what is known as a Customhouse, in New York city, where the customhouse officers collect taxes, known as customs or duties, on the goods brought into the port from foreign countries. The receipts of the New York customhouse are enormous, more than those of all the other customhouses of the United States together.

The post office of the city distributes about 5,000,000 letters a day, which shows us in another way what an enormous amount of business must be done in the city.

An important aid to the business of the city is its great number of large banks, where merchants and others may deposit their money and draw against it by check, borrow money when they need it, and transact other business.

With all these signs of the business activity of New York before us, it is not difficult to realize that in industry and wealth it is truly the Imperial City of the Western Hemisphere.



THE NEW CUSTOMHOUSE.

PHYSICAL CONDITIONS DETERMINING ITS GROWTH AND IMPORTANCE

Situated at the mouth of the Hudson River, New York naturally receives from the north and west much of its commerce, and most of the European trade reaches or goes through the city. Its location on one of the finest harbors of the world made it

even from the very first a natural trading post. Its climate is uniform and moderate, both in winter and in summer, and it is remarkably free from unhealthful or weakening surroundings. Again, the city with its borough harbors and coast indentations, has a water front



GRAND CENTRAL DEPOT, MANHATTAN.

of some 350 miles, which gives it by far the greatest shipping and docking advantages of any city in the world. When we consider, further, that New York city is so located that it is easily reached by all railroad lines, from north, west, south, and east, it is not difficult to understand why it is the metropolis of the Western Hemisphere, nor to prophesy with certainty that some day it will become the great world city, of a size and importance far beyond that of any city the world has hitherto known.

MEANS OF TRANSPORTATION AND COMMUNICATION

We have already seen how man in his efforts to make trade and travel easy has improved the advantages offered him in New York state; how he has built highways, railroads, canals, bridges, steamships. New York city shows, even more than the rest of the state, what wonders the mind and hand of man may accomplish.

The ordinary means of travel within the limits of New York city to-day are: elevated roads, surface cars, underground railways, ferries, and bridges.

Elevated roads, of which the first was built in 1876, are found in the boroughs of Manhattan, The Bronx, and Brooklyn. These were the earliest means of rapid travel in New York city. For five cents, one may travel from the Battery by way of Second or Third Avenue through Harlem, and well into The Bronx: or, from the same starting point, by way of Sixth or Ninth avenues, to the Harlem River at 155th Street, where connections are made with railroad trains for the city limits and suburban towns. From the Manhattan end of the Brooklyn Bridge one may journey on the elevated road to Coney Island, to Ridgewood, or to Jamaica, and from the Manhattan end of the Williamsburg Bridge, another route to Jamaica and Ridgewood is open. The trains on the elevated roads are now operated by electricity.

Surface cars on most lines are run by electricity, though in a few cases they are drawn by horses. A great network of

surface cars spreads over the city, making it possible for people to travel about with speed and convenience to all parts of the town.

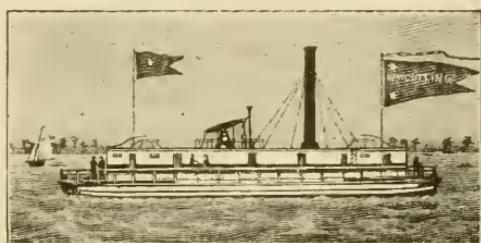
Subways.—Another means of transportation in the city of New York is the Subway, which connects the City Hall with Van

Cortlandt Park, Bronx Park, and the most distant parts of Bronx Borough. Fourth Avenue, Lexington Avenue, Seventh Avenue, and Broadway are traversed in this way.

The Subway connection with

Queens Borough is made through a tunnel at 42d Street, and from Long Island City a branch runs through Brooklyn to the Eastern Parkway. From the City Hall the Subway tunnels the East River, Flatbush Avenue, and Eastern Parkway to the Brownsville section of Brooklyn. The Manhattan end of the Williamsburg Bridge is connected with the Municipal Building, where the Fourth Avenue (Brooklyn) Subway starts over the Manhattan Bridge for Coney Island. New York is connected by the Hudson River tunnels with three great railroads in New Jersey.

Ferries.—As the boroughs of the city are separated mostly by bodies of water, the ferries, of which there are forty, do a



EARLY STEAM FERRYBOAT.



FERRYBOAT OF THE PRESENT TIME.

very important work. The oldest ferry in New York, dating back to Dutch colonial times, is the present Fulton Ferry, connecting Fulton Street, Manhattan, with Fulton Street, Brooklyn.



BROOKLYN BRIDGE.

Bridges.—Finding that the ferries would soon be unable to carry the increasing crowds between New York and Brooklyn, the people of those cities decided to have a bridge, and, in 1870, the famous Brooklyn Bridge was built to span the East River. This remarkable structure was one of the world's wonders. Its entire length is over a mile, and the central span measures 1600 feet. Its floor at the highest point is 135 feet from the river, so that sailing craft can manage to go under it easily. It has a roadway, a promenade, and tracks for elevated trains and surface cars. The Williamsburg Bridge



WILLIAMSBURG BRIDGE.

crosses the East River between Delancey Street, Manhattan, and South 5th Street, Brooklyn. Manhattan Bridge crosses the East River between Canal Street, Manhattan, and Nassau Street, Brooklyn. The Queensboro Bridge crosses the East River between 59th Street, Manhattan, and Crescent Street, Queens. High Bridge, crossing the Harlem River at 175th Street, was built in 1842 to carry water from the Croton Aqueduct into Manhattan. Washington Bridge, a handsome structure supported by massive but graceful arches, connects West 181st Street with The Bronx. The Harlem River is crossed also by drawbridges.



HIGH BRIDGE.

PUBLIC WORKS

Water Works.—The water supply in Manhattan and The Bronx is drawn largely from the Croton River and from lakes in Putnam and Westchester counties. Immense dams have been built, which raise the water in some places over 100 feet. The water flows in great aqueducts to reservoirs in Central Park and

at Jerome Park. Thence it passes through iron mains laid under the surface of the streets. The higher portions of Manhattan are supplied from the High Bridge reservoir, and one at 97th Street and Ninth Avenue. Brooklyn is supplied mainly through the Ridgewood reservoir, from the streams and lakes of Long Island.

The city of New York has grown so rapidly that the water supply has been taxed to its limit. To provide for future needs, a new system has been constructed for bringing water from the Catskill Mountains. The Catskill aqueduct has a capacity of 500,000,000 gallons a day, and the

Ashokan reservoir, the largest in the system, once filled, could supply the city for eight months without any water flowing into it.

It is estimated that over 350,000,000 gallons of water are consumed daily in Manhattan and The Bronx, and 150,000,000 in Brooklyn. All this water must in one form or another be disposed of, and for this purpose immense sewers or drains, some of them fifteen feet wide, extending under the streets of the city, back and forth and across some 2250 miles, carry off the waste and deposit it far out in the rivers.

Streets and Driveways.—Different commissioners are appointed to look after the opening of new streets and the closing



RESERVOIR, HIGH BRIDGE.



WASHINGTON BRIDGE AND HARLEM RIVER DRIVEWAY.

of old ones, to see that the streets are kept clean and free from snow, to build boulevards (like the Riverside Drive in Manhattan, the Southern Boulevard in The Bronx, and the Eastern Parkway in Brooklyn), speedways (like the Harlem River Driveway in Manhattan), and cycle paths (like that on the Ocean Parkway in Brooklyn, extending from Prospect Park to Coney Island).

Docks and Piers. — The docks and piers of New York city are controlled by one of the departments of the city government, which builds, repairs, and rents the wharves that line the shores of Manhattan and Brooklyn. There are about 230 piers in Manhattan and 60 in Brooklyn. Along the Hudson, north of 12th street, are piers of most of the great ocean liners, and below 12th



DRIVEWAY IN CENTRAL PARK.

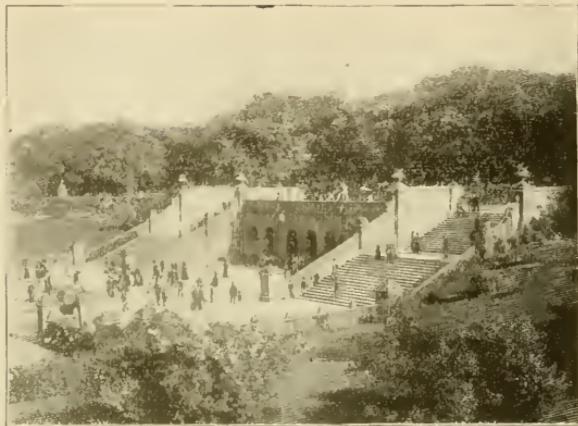
Street are the river and coastwise steamers. Farther down the river the docks are mainly those of the ferries and freight lines. Extensive shipping is carried on also on both sides of the East River. At the foot of Canal Street the Ocean Steamship Company has a steam-heated wharf for the storage of southern fruit. A tour of the water front of New York city would be a trip of great value even to the city boy or girl. In such a walk he might study many things of interest; the names and nationalities of the ships painted at their sterns, the different cargoes loading and unloading, and the flags of the different nations afloat at the mastheads.



PIERS AND DOCKS, EAST RIVER.

PARKS

The people of a busy commercial city whose lives are passed in the hurry and rush of exciting events, must find some means of refreshing body and mind. Foremost among these means are our parks, many of them in the very heart of the crowded city, where the people may enjoy open fields, green grass, and shaded walks, without having to go out into the country. The most



VIEW IN CENTRAL PARK.

for nearly half a century. In the center of Brooklyn is Prospect Park, over half the size of Central Park, and scarcely less famous. Adjoining Prospect Park is what is known as the Parade Ground, where one may see thousands of men and boys playing baseball or football during the season. Each of these large parks has acres of beautiful meadow and woodland, with miles of well-made, wide, and shaded driveways, and charming paths across the fields, over hills, and through ravines. Each has a lake of several acres, on which are launches and rowboats in summer, and which, when frozen over in winter, are thrown open to thousands of skaters.

famous of these city breathing places is Central Park, which lies almost in the center of Manhattan, extending in length from 59th to 110th streets, a distance of two and one half miles, and half a mile in width. Central Park has been in existence



MARYLAND MONUMENT, PROSPECT PARK.

Each, too, is made more beautiful by the addition of many handsome stone arches and bridges, ornamental rustic houses, and monuments of bronze and of marble. Among the monuments in Central Park the most striking is the Egyptian obelisk, known as Cleopatra's Needle, which was presented to the city by the Khedive of Egypt in 1877. It is about 3500 years old, dating back before the time of Moses.

In The Bronx there are several parks, two of them, Van Cortlandt and Pelham Bay,



ENTRANCE TO PROSPECT PARK.



VIEW IN CENTRAL PARK.

which contains the botanical gardens, the zoölogical gardens, the famous rocking stone, and the Lorillard Mansion, bids fair to be

much larger than Central Park, but as yet not fully developed. Van Cortlandt Park, in the western part of the borough, is a beautiful forest of 1100 acres in which is located the old Van Cortlandt Manor House, now used as a museum. Bronx Park,



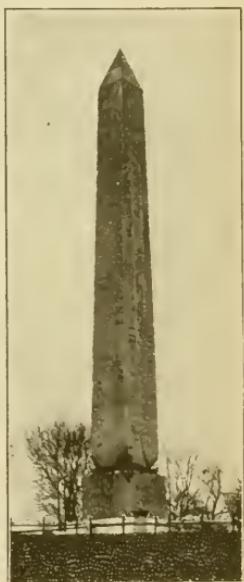
VAN CORTLANDT MANOR HOUSE.

the most beautiful of all, especially in the neighborhood of the Bronx River. Pelham Bay Park, twice the size of Central Park, is in the northeastern part of the borough, and stretches along by the Sound to the northern city limits. These three parks are connected by magnificent roadways.

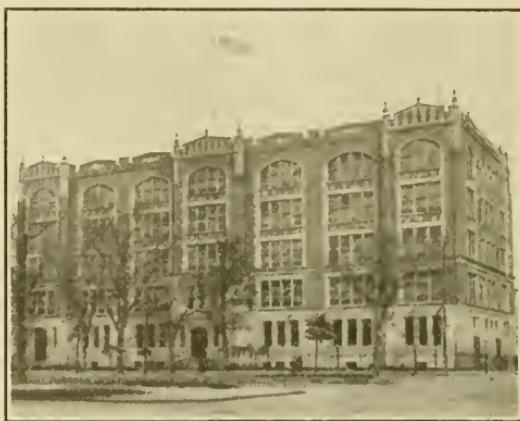
In addition to the large parks, there are more than a hundred small parks or squares, each of only a few acres, yet scattered about in such a way that nearly every inhabitant has one of these open spots somewhere near his home. Of these, Union Square, Madison Square, Tompkins Square, Bowling Green, Stuyvesant Square—all in Manhattan—are perhaps the best known.

PUBLIC SCHOOLS

The history of education in New York city may be said to have begun when the first Dutch schoolmaster, Adam Roelandsen, set up his little school in New Amsterdam in 1633, and began to ring bells, comfort the sick, and

THE OBELISK,
CENTRAL PARK.

take in washing to eke out a living. From this small beginning, our great school system of to-day has grown, in which 850,000 children attend the public schools in 600 different buildings where 20,000 teachers do their daily work. In this vast system pupils from the kindergarten to the college are educated at the expense of the city, and the money for this purpose is raised almost entirely by a tax on the property owners of the city.



A NEW YORK SCHOOL BUILDING, BROOKLYN.

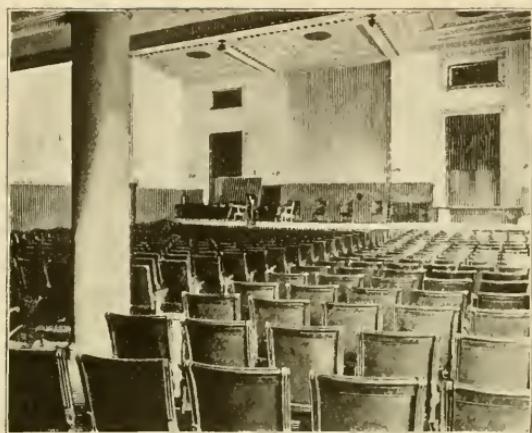
Some of the buildings used by the New York public schools are magnificent and possess every advantage for the comfort and education of the school children. Many of them seat 3000 children.



A CLASS IN CARPENTRY WORK.

sewing, and where possible, the girls learn cooking and the boys do carpentry work.

In the public schools, besides the regular studies, English, arithmetic, geography, history, etc., the girls are instructed in



HALL OF THE BOARD OF EDUCATION.

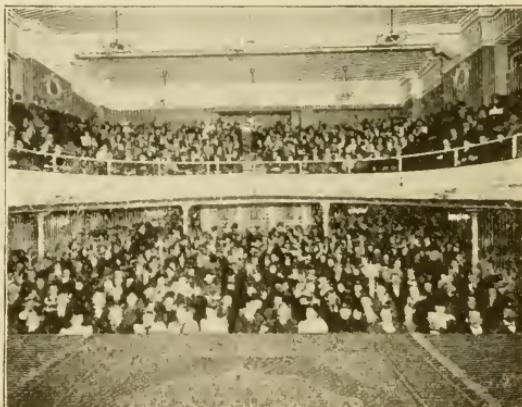
York City Normal College) offers the same privileges to girls.

The elementary schools and the high schools are under the control of the Board of Education, whose imposing building is located at 59th Street and Park Avenue, Manhattan. This Board, consisting of forty-six members, elects a City Superintendent of Schools, whose duty it is to see that the laws of the Board are enforced.

Summer schools and playgrounds are supported by the city for the children of the more crowded sections; and in the different boroughs there are over a hundred evening

The High Schools, of which there are twenty-five, furnish a more complete education to those desiring it, and prepare many of their pupils for college.

The College of the City of New York is free to the graduates of the city high schools, and Hunter College (formerly the New



AT AN EVENING LECTURE.

schools, where men and women, as well as working boys and girls, are given a chance to get an education. In many of the schools, public evening lectures on all subjects are given, which the parents of the pupils attend in large numbers.

OTHER PUBLIC INSTITUTIONS

Libraries. — New York city has many other means besides public schools and public lectures for the education of her citizens, and probably next in importance comes the vast system of public libraries. The efforts to provide free books for the reading public of the city has resulted in the union of five great sources, — the Astor Library, formerly in Lafayette Place, the Lenox Library, formerly on Fifth Avenue and 71st Street, the Tilden bequest, the former New York Free Circulating Library, and lastly the fund of over \$5,000,000 given by Andrew Carnegie. The central building of the new library, which has branches in all the boroughs, is located on Fifth Avenue, extending from 40th to 42d streets, and it is one of the largest library buildings in the world.

Museums. — The American Museum of Natural History occupies the long block on 77th Street, between Central Park and Columbus Avenue. This mammoth building, now only about one third complete, has a frontage of nearly one sixth of a mile, and is a most imposing structure. Here may be seen a wonderful collection of stuffed birds and other animals, and many curious collections of fossils and mummies and relics of living and extinct nations and tribes. It would take years to



THE MUSEUM OF NATURAL HISTORY.

study carefully all that is here exhibited, but even a single visit to it is very profitable.

The Metropolitan Museum of Art is located in Central Park on the Fifth Avenue side, fronting on 82d Street. In it one may see the works of the greatest of the world's painters and sculptors, workings in bronze, famous historical tapestries, vases, pottery, and porcelains.



THE METROPOLITAN MUSEUM OF ART.

The Brooklyn Institute of Arts and Sciences, on the Eastern Parkway, includes museums, lecture and concert rooms, and a botanical garden.

The New York Botanical Garden occupies 250 acres of land in Bronx Park on the Harlem Railroad. The garden is being filled with hardy plants, both American and foreign; the more delicate specimens of plants, not adapted to our climate, are exhibited indoors. Near by are the New York Zoological Gardens, where many varieties of birds and other animals are kept in immense cages, large enough for them to continue their accustomed habits



THE BOTANICAL GARDEN.

of life. Ranges are made for buffaloes, dens for wolves and bears, ponds for beaver, seals, and alligators, houses for monkeys, and for all kinds of reptiles.

While making the round of the museums one must not fail to visit the New York Aquarium at Battery

Park in the old immigrant building, Castle Garden. Here are found fishes from all the waters of the United States, and



THE ZOOLOGICAL GARDENS.



THE AQUARIUM — EXTERIOR.

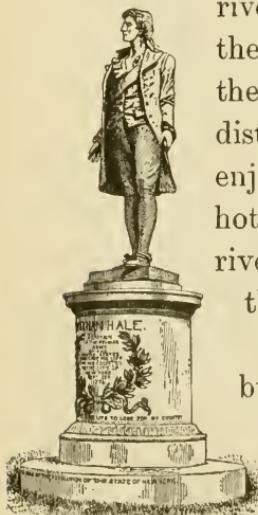
Recreation Piers, immense halls built out over the entire length of some of the large piers on the

rivers, where the people of the crowded districts may enjoy on the hot summer nights the breezes that blow over the river and the music which the city furnishes for their pleasure.



THE AQUARIUM — INTERIOR.

Monuments. — To keep before the minds of our busy people the memory of great men who have died, many monuments have been erected throughout the city. There are statues of Columbus, Stuyvesant, Washington, Lafayette, Franklin, Webster, Lincoln, Grant, Shake-



STATUE OF NATHAN HALE.

the hundred and more tanks occupied by them furnish subjects for study and amusement.

Among the other free amusements for the people are the



THE WASHINGTON ARCH.

peare, Irving, Scott, Morse, and many other famous soldiers, statesmen, authors, and inventors. The Washington Arch, at the foot of Fifth Avenue on Washington Square, was erected soon after the centennial celebration of Washington's inaugural.

Charities. — An important branch of the city government, established to protect the health of the poorer classes, is the Department of Public Charities, which provides stations where patients

may be treated for disease or undergo operations.

The Navy Yard of the United States is located at the head of Wallabout Bay on the East River, in Brooklyn. The immense grounds, covering nearly 150 acres, present many interesting sights. Among them are cannon and trophies of many wars. The stone dry-docks, capable of launching a first-class battle ship, are of spe-



ENTRANCE TO THE NAVY YARD.



NEW YORK POST OFFICE, MANHATTAN.

and is under the control of one of the rear admirals of the navy.

Baths. — Many public baths are located along the river fronts. During the summer months the daily average of bathers is 100,000, who are thus enabled to enjoy the benefits of salt-water bathing without expense.

Public Buildings. — The New York Post Office building, completed in 1914, is on Eighth Avenue, 31st and 33d streets. This office has many stations and substations scattered throughout Manhattan and The Bronx, and handles millions of letters a day. There are departments for the care of city mail, domestic mail, foreign mail, registered letters, parcel post, and special delivery letters. Several mails are distributed daily, and several collections are made from the thousands

cial interest. Many vessels of the navy are stationed here at different times, and may be boarded by visitors by permit from their captains. The yard was founded in 1801,



BROOKLYN POST OFFICE.

of letter boxes along the streets. The Brooklyn Post Office occupies a fine, large building at the corner of Washington and Johnson streets. With its stations and substations, the service is as good as that in Manhattan. The other boroughs are also provided with post offices.

In the City Hall Park, between Broadway and the Brooklyn Bridge, is the old City Hall, one of the best examples of early



CITY HALL.



BROOKLYN BOROUGH HALL.

nineteenth-century architecture to be found in the state. In this building are the offices of the mayor, the Board of Aldermen, and the Board of Estimate and Apportionment. Near by are the County Court House, the Hall of Records, and the lofty Municipal Building, completed in 1913. In the Municipal Building are the offices of the heads of most of the city departments, and of the borough officials.

The former City Hall of Brooklyn, now known as the Brooklyn Borough Hall, is located in the triangle bounded by Fulton, Joralemon, and Court streets. This fine, white marble building faces a well-kept small park, and contains the offices of the borough president, and of the other borough officers. The County Court House is near by.

The State Arsenal, used for the storage of arms and ammunition, is located at the corner of Seventh Avenue and 35th Street, Manhattan.

The city has eighteen armories which the various regiments of the national guard, the signal corps, squads of cavalry, etc., use for meetings, drill, and storage of arms and ammunition. The national guard is composed of enlisted citizens, who may be called out to quell riots or to



ARMORY OF THE 12TH REGIMENT.

defend the country. The finest armories in the city are those of the 7th, 22d, and 71st regiments of Manhattan, and of the 13th and 23d regiments, and Troop C of Brooklyn.

Police.—For the purpose of preserving law and order and for the protection of life and property, New York has established one of the best police departments in the world. There are about 13,000 uniformed police on the force, and the system is divided into eighty-seven precincts, with a captain in command of each. The Central Police Office is at Centre and Broome streets, Manhattan, where the chief of police makes his headquarters.

GREAT MERCANTILE CONCERNS

From the very beginning of cities and large communities, the different trades, or as they were once called, the guilds, lived in localities by themselves. This was true in the old Dutch Colony days in New Amsterdam, where different trades located in particular streets, that took their names from the trade or occupation of the dwellers in it.

This grouping of occupations, the growth of nearly three centuries in New York city, is also true of the great mercantile concerns of to-day, especially in the borough of Manhattan. For example, the great wholesale dry-goods houses are along and about Broadway, between Prince and Reade streets. This district of about 135 acres is said to have stored in it a larger amount of merchandise than can be found within an equal area anywhere else in the world.

On the east side of Manhattan, south of the Brooklyn Bridge, is the district known as the "Swamp," which is the center of the trade in hides and leather.

In and near Maiden Lane is the wholesale jewelry district,



LOWER BROADWAY.

while up town are the fashionable retail shops, in which are displayed rich collections of precious stones and metals.

Along Fifth Avenue below 42d Street are most of the important book and magazine publishing concerns.

Most of the great newspaper offices are grouped in Park Row, near the City Hall, in what is known as Printing House Square, in the center of which stands a statue of Benjamin Franklin, the greatest of all printers.

Other districts are especially devoted to the sale of cutlery and hardware, of furniture, of clothing, of automobiles, etc.



WOOLWORTH BUILDING, MUNICIPAL BUILDING, AND PARK ROW.

While retail shops of all kinds are to be found throughout the city, there are certain central localities where have grown up what we call "department stores." These concerns, occupying



HERALD SQUARE AND INTERSECTION OF BROADWAY AND SIXTH AVENUE.

buildings of many floors and immense area, sell under a single roof almost any line of articles you could imagine—dress goods, jewelry, hardware, furniture, groceries, and even meats and fish. In Manhattan there are great department stores on Broadway, Fifth, and Sixth avenues. The main department-store district of Brooklyn is centered on Fulton Street below Flatbush Avenue.

Most of the goods which we have considered are staple articles which may be kept in stock for a long time, but much of our food, such as vegetables, fruits, and fresh meat, has to be

brought to the city daily in fresh supply. The retail grocer or butcher goes every morning to one of the markets where he buys



WALLABOUT MARKET.

which occupies a convenient location on Wallabout Bay, and in its blocks of stores constitutes a little village of its own.

FINANCIAL CONCERNS

In any great city it is necessary that business should be carried on quickly and easily, and those concerns that help in this respect are very important. There are the regular business banks where the business man deposits his money. By doing this he is able to pay his bills by writing "checks," which are simply orders to the bank to pay out a part or all of the money he has deposited there. This is easier and more convenient than keeping large amounts of money on hand. These same banks, too, loan money to the business man when he wishes to buy quantities of goods and cannot pay for them until after he has sold them.

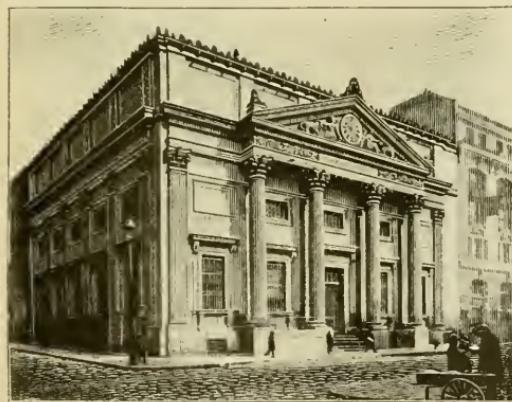
There are many of these banks in New York city, and some of them are housed in very handsome buildings.

Besides this kind of bank there are Savings Banks, where people of limited means may deposit their money, and by leaving it with the bank for months at a time earn interest money on it.

There are so many banks in New York that they have what is known as a Clearing House where the messengers from the different banks meet daily to exchange the checks which their banks have received and cashed for one another. The Clearing House is located in a



BROOKLYN SAVINGS BANK.



BOWERY SAVINGS BANK.

substantial building on Cedar Street, the chief feature of which are the three wonderful vaults or safes which it contains. These safes are of great size and strength, and are provided with a most remarkable system of protection against fire and burglary.

Wall Street is known the world over as the financial center of the United States. On the corner of Broad Street is the new

building of the Stock Exchange. It is in this exchange that the stocks of the great railroad, steamboat, and manufacturing companies are bought and sold — millions of dollars worth every day. In and about Wall Street are many banks and the offices of brokers who act as agents for people

A BANK VAULT.

who wish to sell or buy stocks. On the street is the granite building of the United States Subtreasury, where millions of dollars are stored. It was in the old Federal Hall which formerly stood here, that Washington was inaugurated first President of the United States, and a statue of Washington in front of the present building commemorates the event.

For many hours in the day this Wall Street district is in a feverish excitement of business bustle



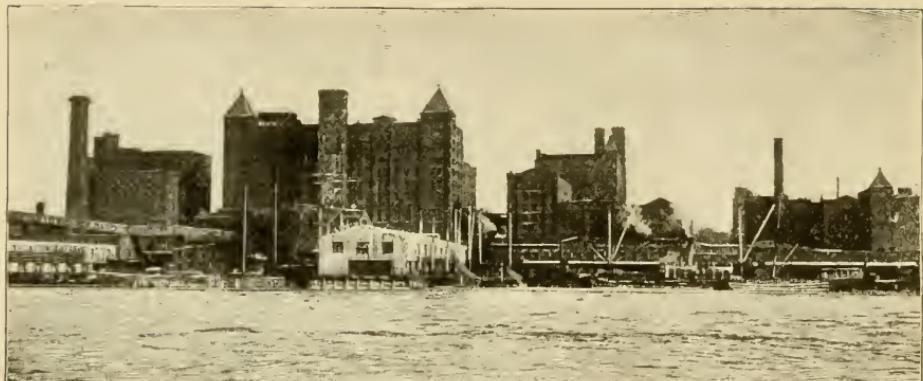
WALL STREET.

and worry. It is only as you look at the stately old Trinity Church at the head of the street, with its peaceful graveyard and its memories of two hundred years, that one is reminded that life is not all money getting.

MANUFACTURING CONCERNS

The city of New York is by far the greatest manufacturing center of the United States. It produces more than one half of the manufactures of the state and more than one tenth of those of the entire United States. New York and Pennsylvania are the only states in the Union whose manufactures are as extensive as those of this one great city. A total of 26,000 manufacturing concerns gives employment to over half a million people. Even on Broadway, which at first sight seems to be devoted entirely to commerce, an immense amount of manufacturing, especially of clothing, is carried on. This is the leading product of the city, and clothing is made to the value of half a billion dollars annually. When we stop to consider that 125,000 persons are engaged in this line of work, we can begin to get an idea of its importance. Workmen of all grades are employed, from the half-starved, poorly paid toilers in the East side sweat shops to the most fashionable of Fifth Avenue tailors. There are in the city several large hat factories, the greatest of which are in the borough of Brooklyn.

Next in importance to the clothing industry is the refining of sugar and molasses. Immense refineries are located along the East River front in Brooklyn, where boats laden with crude cane

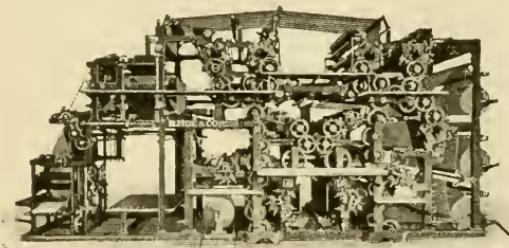


SUGAR REFINERIES, BROOKLYN.

sugar from the far south deposit their cargoes. Here it is boiled in immense pans, and thousands of barrels of sugar ready for use are produced daily. Seven eighths of the city's refining is done in Brooklyn.

The printing and publishing of books, magazines, and newspapers is one of the main industries, and in it New York leads the

cities of the United States. Some factories make a special business of setting up the type and making the plates from which books are printed; others do only the press work; others only bind books;



A NEWSPAPER PRESS.

while some concerns carry on the whole operation from the type to the printed and bound book. All the leading newspaper offices do their own printing, using presses, into one end of which is fed

paper in large rolls, and from the other end of which are sent out the finished newspaper of a dozen or more pages, all folded and even counted, ready for selling to the newsdealers.

There are gas plants in which gas is manufactured for lighting, heating, and cooking, and sent out by pipes into residences and other buildings to a distance of many miles.

Foundries, cigar factories, breweries, machine shops, bakeries, carpenter shops, coffee and spice grinding mills, and many other concerns, are to be found in large numbers, and often occupying buildings of immense size.

Many of the large manufacturing concerns are located on the water front, where the work is more easily carried on because scows may land at their very doors, to bring coal for their great furnaces and to carry off ashes, to land raw materials and to take away the finished manufactures.

LEADING FACTORS DETERMINING PUBLIC IMPROVEMENTS

The public improvements of our city are of such magnitude as to lead us to inquire further into the causes that have determined them. The situation and physical features of the several boroughs are so entirely different, that different methods have to be followed in planning improvements. In Manhattan, whose shape is long and narrow, avenues have been laid out running in many cases parallel to the greatest length of Manhattan Island. Madison, Lexington, and the numbered avenues are straight roads, each of them several miles in length. Except in the

lower part of the borough and in a few sections settled before the rapid growth of the city really began, most of the cross streets are known by numbers and run at right angles to the avenues.



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MULBERRY BEND, BEFORE IMPROVEMENTS WERE MADE.

formed by the union of many growing villages, we find a very different arrangement of streets. In fact, the original cow paths, lanes, and roads, irregular and crooked, form the beginnings of many of the important streets. Brooklyn therefore is much more difficult to travel around in, and its shape requires many intersecting car-lines.

This makes it very easy to find most places in Manhattan, and it determines the location and direction of the main lines of transportation.

In Brooklyn, fan-like in shape and



MULBERRY BEND AT THE PRESENT TIME.

The streets in both Manhattan and Brooklyn have been laid out in regular order by squares whenever this has been possible, and the tearing down of rows of wretched old buildings, irregularly located, has given room for new small parks. One of the most noted instances of this kind of improvement is the Mulberry Bend Park, in lower Manhattan. The Building Department of the city has condemned buildings in many other overcrowded sections.

The ferries, of which we have spoken, are made necessary of course by the fact that the boroughs are largely surrounded by water. Bridges came about naturally when the ferries were unable to handle the rapidly increasing traffic.

The increase in wealth and population of our city has made possible the building of the immense libraries, museums, and schools for the education of the people, and has made not only possible, but necessary, the system of water supply, drainage, and the other comforts and luxuries that we find necessary to our life of to-day.

NEW YORK HARBOR

New York Harbor, one of the largest and most beautiful in the world, excites the wonder and admiration of all strangers who gaze upon its beauties for the first time. As it has been a very important factor in the growth of the city, we will devote a space to the study of its most interesting features. The harbor consists of the Lower Bay, outside of the Narrows; the Upper Bay, from the junction of the Hudson and East

rivers to the Narrows; the lower Hudson, and the East River. The Lower Bay, in which there are nearly 100 square miles of anchorage, includes Raritan Bay, Sandy Hook Bay, and Jamaica Bay.



NORTH FROM BROOKLYN BRIDGE.

the ocean in three ways,—through the narrow straits on the western and northern sides of Staten Island; through Long Island Sound and the East River; and through the Narrows from the Lower Bay. The Staten Island entrance is narrow and cannot be used by heavy vessels, and the East River is turbulent and treacherous, so that most vessels enter by way of the Narrows, which is guarded by Forts Wadsworth and Tompkins on the Staten Island side and Fort Hamilton on the Long Island shore.

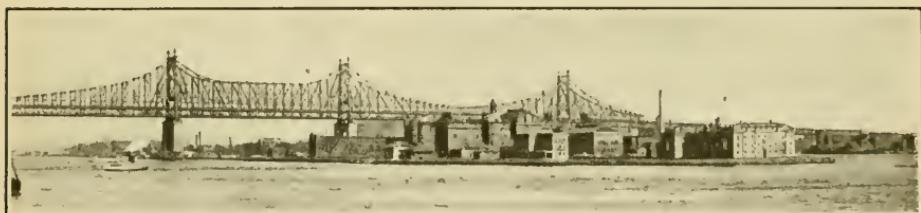
Two channels near Sandy Hook give entrance into the Lower Bay to vessels from the Ocean. The great International Yacht Races are held here.

The Upper Bay may be entered from



SOUTH FROM BROOKLYN BRIDGE.

The entrance to the East River from the Sound is protected by Fort Schuyler, located on a long peninsula called Throgs Neck, and by the fort at Willets Point on the other side of the river. Five miles farther on are North Brother and South Brother islands, on the former of which smallpox patients are quarantined. A beautiful sail of a mile or so brings us to Randalls Island where are located schools, hospitals, and a House of Refuge for children. Just south of Randalls is Wards Island, which contains the city hospital for the insane. Blackwells



BLACKWELLS ISLAND.

Island farther south is a long, narrow strip of land, on which are many buildings, used mostly as prisons and erected by convict labor. The island, in spite of the gloomy uses to which it is put, is beautiful in appearance, especially in summer.

In the Upper Bay are located Governors, Bedloes, and Ellis islands, that look at a distance like little green dots in the glistening bay. All these islands belong to the United States government. Governors Island, with an area of one hundred seventy-three acres, contains a fort and is beautifully laid out with trees and walks. A parade ground is used by the troops quartered here. Here also is fired the "sunset gun." Ellis Island is now used as the landing place of immigrants to New York. Castle Garden

near the Battery was formerly used for this purpose. On Bedloes, or Liberty Island, is located the famous Bartholdi Statue, presented by the people of France to the United States in 1886. This magnificent figure of Liberty Enlightening the World is a bronze



LIBERTY ISLAND.

statue 150 feet high and located on a pedestal as high as the figure itself. Especially at night, when the torch in the hand of the figure gives forth its brilliant light, it may be seen for miles around, a fitting symbol of the giant city,

that in its growth of three centuries has witnessed the struggles of brave men for liberty of speech and liberty of action.

Having now studied the metropolis as it is to-day, we will look back and see how it grew from the little settlement of New Amsterdam into the imperial city of New York.

LOCAL HISTORY

Discovery.—Over three centuries have passed since Henry Hudson, on his famous cruise along the eastern coast of America, first gazed upon the wild region where the greatest city of the Western World now stands. As he sailed through the Narrows into the Bay there rose before him a beautiful island, forest-covered and crossed by streams that flowed, some to the left into a mighty river, and some to the right into a wave-tossed

strait. Behind him a range of protecting hills that seemed to extend from the Jersey shore approached so close to Long Island that they formed an excellent harbor.

It was on September 12, 1609, that Hudson with his crew of the *Half Moon* sailed past Manhattan Island and the Palisades, and began his trip up the river beyond the Highlands to the site of Albany. Upon Hudson's return to Holland, Hendrick Christiansen and Adrian Block, stirred by his accounts, soon after fitted out trading-ships and came to this country. Others followed, until the fur trade with the Indians became an important Dutch industry. A fort was erected in 1613 at the very southern point of Manhattan Island. This



HENRY HUDSON.



THE HALF MOON ON THE HUDSON.

was not only a fur depot but a point from which the exploring and trading expeditions started along the coast. Thus early we see that Europeans were drawn to New York mainly for purposes of trade. A warehouse, protected by a fort, was built at Albany in the year 1614, and the United

New Netherlands Company thus changed the little colony into the Empire State.

First Settlements.—It was nearly ten years later, in May, 1623, that the good ship, *New Netherland*, brought a number of colonists to this country. Most of them were Walloons, people of Holland whose fathers had fled from France on account of religious troubles. Eight of these thirty families remained at the fort and settled the village of New Amsterdam, the beginning of New York city; others settled in Albany, New Jersey, and Connecticut, while a few crossed the East River, and, at Wallabout, where the Brooklyn Navy Yard is now located, built up a little settlement, which, however, disappeared soon after. The first permanent settlement on Long Island was made thirteen years later at New Amersfoort, afterward called Flatlands.

Flatbush.—One of the most interesting of the former Dutch towns within the present limits of New York city is Flatbush, settled just before the middle of the seventeenth century, and known as Midwout by the early Dutch. As long ago as 1654 it had a church where the settlers came for worship from Amersfoort, from New Utrecht, and from Brooklyn, then a mere hamlet near the site of the present borough hall. It now comprises many acres in Brooklyn, east and south of Prospect Park, where in certain sections are still to be found some very old houses of the Dutch style.

Peter Minuit.—For nearly forty years the Dutch West India Company sent out governors to manage the affairs of the colony. The first of these was Director General Peter Minuit, who arrived at New Amsterdam in 1626. He was a shrewd merchant and was very successful in directing the trade of the colony. But by far the greatest bargain that he made, and probably the most re-

markable real-estate transaction in history, was the purchase of the island from the *Manhattan* Indians for twenty-four dollars' worth of beads and trinkets. And the strangest part of it is that both Dutch and Indians were probably equally sure that they had the better of the bargain. During the six years of Minuit's rule the coasting trade became a great industry, and the town rapidly increased in wealth and prosperity.

Peter Stuyvesant.—Governors Van Twiller and Kieft, the successors of Minuit, managed affairs so badly that in 1647 Peter



PETER STUYVESANT.

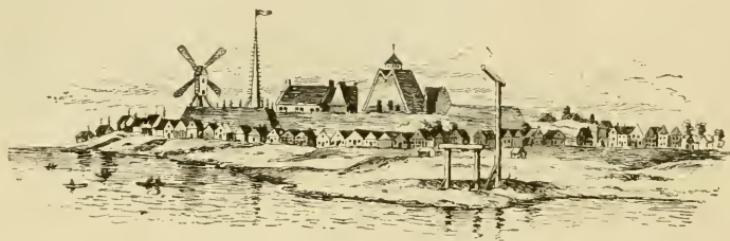
Stuyvesant was sent over by the company to straighten out matters. He was the last and the greatest of the Dutch governors, a very strict ruler, and a very just man, according to his own ideas of right and wrong. His idea of right was to serve his employers, the Dutch West India Company, no matter what the colonists wanted or deserved. The people, not getting their rights from Stuyvesant, appealed to the company, and succeeded, in 1653, in getting a city charter. This charter gave them the right to govern themselves through officers — called burgomasters and schepens — selected from the citizens of the town. Although



PURCHASE OF MANHATTAN ISLAND.

Governor Stuyvesant kept the reins of power in his own hands by appointing the officers from his own circle of friends, a step had been taken in the right direction — New Amsterdam had become a city.

In his dealing with the Indians, Governor Stuyvesant showed great courage and common sense, and through his wise efforts in this direction, the colony grew much stronger and better able to defend itself against attack.



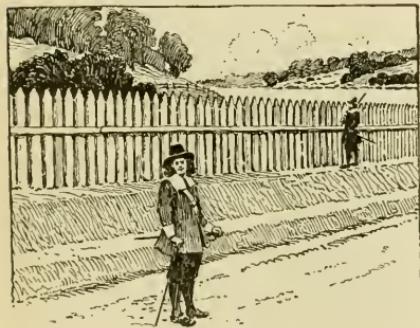
NEW AMSTERDAM IN 1656.

The English for many years had claimed this region by right of the discoveries of the Cabots. Taking advantage of the discontent of the Dutch under Stuyvesant, they sent Colonel Nichols with a fleet to demand the surrender of New Netherland. It was found that most of the Dutch were glad to yield, and in spite of the angry protest of Stuyvesant, the surrender of the fort and city of New Amsterdam was made on September 8, 1664, the control of New Netherland was quietly transferred to the English, and New Amsterdam became New York.

After the surrender Stuyvesant went to Holland, where he remained a short time. Upon his return to New York he retired to his "bouwerie," or farm, which covered a large tract

of land extending from the present Fourth Avenue to the East River, in the neighborhood of 14th Street. Here the doughty old governor passed the rest of his life in peace and happiness. He died in 1672 at the age of eighty, and lies buried in the vaults of Saint Mark's Church on 10th Street and Second Avenue, where, among the monuments of many great men, there is a tablet to his memory.

New York in 1664. — A strange picture indeed this quaint little town of New Amsterdam makes in the background of our city's history. At its northern extremity a wall, built to



THE OLD WALL.



STUYVESANT'S HOUSE ON THE BOWERY.

keep out the English and the Indians, extended from river to river. At the eastern end was the Water Gate, and at the western end stood the City Gate, defended by a blockhouse and a little half-moon battery of two guns. This wall was made of twelve-foot logs, embedded three feet deep in the earth, and strengthened here and there by towers and blockhouses. Inside of the wall, to the south, were a ditch, a rampart, and a broad lane, now known as Wall Street, bordered by the rude cabins of the lowest class of the people. The princi-

pal street of the city was De Heere Straat, now Broadway, which extended to the wall from the Bowling Green.

Bowling Green is one of the most interesting landmarks of the city. It was laid out early in the history of New Amster-



BOWLING GREEN IN DUTCH TIMES.

Here the boys and girls met for play, and on a summer afternoon even the quiet and dignified burghers indulged in their favorite game of "bowls." It continued to be a fashionable promenade for 200 years, and in spite of all the changes that have taken

place in the city, the Bowling Green remains a public park to this day. In the old days one could step from the grassy walks of the Green into the inclosure of the little fort, within which

dam as a common or meeting ground for the people. Here occurred the marketing, the signing of treaties with the Indians, the parades of the military, and the celebration of victories.



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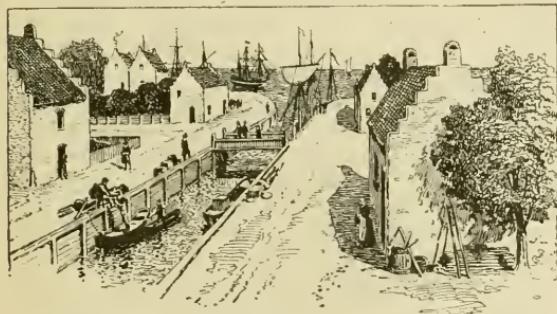
BOWLING GREEN AT PRESENT.

were the governor's mansion, the jail, and the stone church.

East from the fort, a road known as the Bridge Street led to the bridge across the principal canal which flowed along what is now Broad Street. On the other side of the canal this road became the High Street and ran north to the wall at the Water Gate. Here began the river road to the Long Island Ferry, which was located at the present Pecks Slip.



THE FORT IN 1664.

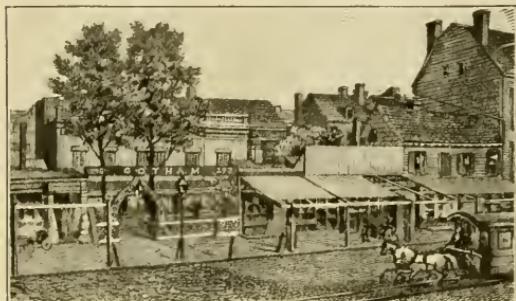


BROAD STREET, 1664.

The entire city then, in 1664, lay south of the present Wall Street. It contained some 250 houses and had a population of about 1400.

The Bowery.—It was in 1660 that the Indians caused so much trouble that the people living outside the city limits were directed either to come within the wall or to assemble in a village. This led to the formation of a little settlement called the "Bowery" near the present location of 13th Street and Third

Avenue, not far from Stuyvesant's country house. A lane connecting the settlement with the city was also known as the Bowery on account of the bouweries or farms that dotted its length. Just below Canal Street was the famous Bull Head



THE BOWERY SEVENTY YEARS AGO.

and known later as the Thalia. The Bowery's history is one of great changes. Beginning as a forest road, it became a country lane and then a village street; later, a broad avenue, the fashionable driveway and shopping district of sixty years ago. To-day, with its four tracks of cars, its elevated roads, its numerous cheap stores and places of amusement, it presents a scene busier than ever, perhaps, but in sad contrast to its appearance of years ago.

Tavern, managed during the Revolution by Richard Varian, a famous host. On the site of the old tavern was erected in 1826 the fashionable Bowery Theater, rebuilt in 1866



THE BOWERY AT PRESENT.

Harlem.—In 1661, the road that extended from New Amsterdam out through the Bowery to the little village of Harlem, just established on the bank of the East River, was little more than a forest path. For nearly two centuries the only direct approach to Harlem was along this forest road, and the growth of the village was of course very slow. To-day Harlem is a part of New York city. It has a splendid system



OLD HARLEM.



HARLEM AT PRESENT — 125TH STREET, MANHATTAN.

of broad streets and avenues, and contains many elegant public and private buildings, and important manufacturing and mercantile concerns. Its population would make it, by itself, a city of the first rank.

Dutch Customs and Industries.—New Amsterdam, as we have seen, was mainly a commercial city; but on account of its distance from large manufacturing centers, it was necessary that its citizens should make many of the articles which were needed

for daily use—so we find all the trades flourishing; and frequent mention is made in the early records of brewers, bakers, butchers, carpenters, glass makers, coopers, tailors, etc. Dairy and farm products were brought in from the Long Island farms, but each citizen had his own little garden alongside his house, where he raised many of the necessities of life.

The shop of the tradesman was generally on the lower floor of his house. We hear of one great department store owned by Cornelis Steenwyck, where shopping in all lines could be done. It occupied the second floor of the owner's fine house on Bridge Street, and offered bargains in meats and groceries, hardware, cloths, silks, and "notions."

The tavern keepers, of whom Martin Cregier, of No. 11 Broadway, was the most famous, did a thriving business. Daring adventurers penetrated far into the interior to trade with the Indians, bartering worthless trinkets for valuable furs. The coast trade brought the burghers of New Amsterdam into contact with Massachusetts on the north, and Virginia on the south, and enabled them to exchange with the English colonists. But by far the greatest and richest of the New Amsterdam industries were its shipping and foreign trade. Their ocean vessels imported hardware and dry goods from Holland, sugar and molasses from the Barbadoes, dyestuffs and fruits from Curaçoa, and numerous other articles from distant foreign ports.

The old-fashioned Dutch house was built with the gable end facing the street, and the front was generally of stone. The houses of the better class, with their large rooms, sanded floors, and heavy furnishings, were very comfortable and even elegant.

There were, however, on the outskirts many very cheap and wretched houses, made of wood, the front yards often serving as hogpens. The average monthly rental of the New Amsterdam house was about \$1.25.

The Dutch as a class were very hospitable and enjoyed the good things of life with their friends. Our merry Santa Claus celebration at Christmas, our New Year's calling, and our coloring of Easter eggs are all inherited from the Dutch of New Amsterdam.

New York under the English.
— When the colonists in 1664 yielded the control of their government to the English, it was with the hope that they would enjoy greater freedom under their new rulers. There was some improvement, to be sure, but it did not come without a continued struggle to secure their rights from the English kings and their governors in New York.

In 1689, the lower class of the people rose in rebellion against the city government, seized the fort with the aid of the militia, and placed Captain Jacob Leisler in power, as governor. Leisler ruled wisely at first, but as he gained in power, he began to oppress the people, throwing some into prison, depriving others of life and property, and insulting in the most violent way all who



OLD DUTCH HOUSES.

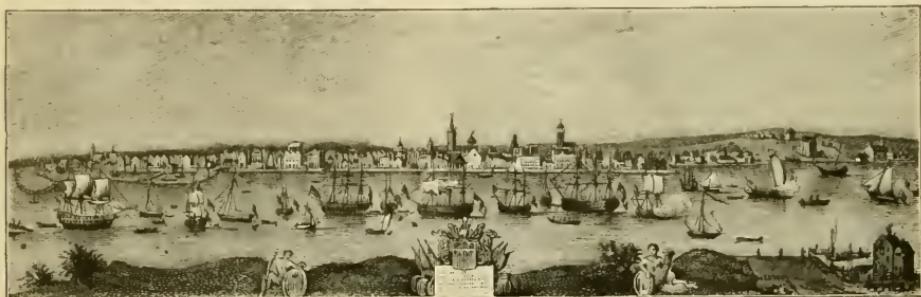
were opposed to him. Many complaints against him were made to the English king, and Governor Sloughter, after a long delay, was sent over to take command of the colony. Leisler at first refused to yield, but was finally arrested and tried for treason, of which he was found guilty. He was executed, and peace was restored to the city that had suffered his misrule for nearly two years.

In the latter part of the seventeenth century the ocean was infested with swarms of pirates, who attacked trading vessels, robbed and murdered their crews, and then boldly returned to New York to boast of their exploits. Lord Bellomont, the new governor, was ordered to suppress them. He fitted out a man-of-war and selected for its captain, William Kidd, a respectable resident of Crown Street (now Liberty), with orders to sail against these sea robbers.

The governor's choice of Kidd was unfortunate, for within a year this respectable gentleman ran up the black flag and declared himself a pirate. In this career he was very successful, and the story of his evil deeds soon spread throughout the world. It is said that he buried immense quantities of gold which many foolish people have sought for to this day, but in vain. After a rather brief career of murder and robbery, he was captured and sent to England for trial. His execution followed without waste of time.

In 1725 occurred a most important event in the history of the city—the founding, by William Bradford, of the first New York newspaper, the *Weekly Gazette*. As this paper took the side of the governor in all his disputes with the people, the

people naturally felt the need of a paper of their own. This paper, the New York *Weekly Journal*, was started in 1734 by Peter Zenger, a pupil of Bradford. The *Journal* began with the *Gazette* that fierce newspaper war which is still going on, though less bitterly, in New York city to-day. But Zenger was not satisfied with fighting the *Gazette* only—he attacked the governor, the mayor, and others in authority, for which he was brought to trial. The result was a glorious victory for the



SHIPPING IN NEW YORK HARBOR, ABOUT 1776.

people, for Zenger was acquitted and the papers won the right, for all time, to discuss freely any public question. Since that time the press has been of great service in guarding the liberties of the people.

And so the struggle for liberty went on, the people fighting stubbornly against all kinds of setbacks and obstacles, until in 1776 they felt that they were strong enough to stand up in bold and open defiance of their oppressors, and to claim in full that for which they had been struggling for over a hundred years—liberty to think, to act, and to govern themselves as a free and independent people.

At the very outset of the Revolution disaster came to our city. The British were victorious in the bloody battle of Long Island, so that Washington and his army were compelled to give up New York city, which remained under British control for seven years. Not long after Washington had retreated, a terrible fire swept over the city, and fully 500 houses were laid in ruins.



TOMB OF ALEXANDER HAMILTON.

Trinity Church. — In its mad rush this fire completely destroyed Trinity Church, which stood on Broadway at the head of Wall Street. This famous church had been built in 1697, when the English Episcopalians wished a better place of worship than the old stone church in the fort. It was not rebuilt until after the war. The present building was erected in 1846. In the churchyard are many tombstones dating back to the time of the first church. Alexander Hamilton, New York's greatest statesman, lies buried there.

St. Paul's. — Trinity Church exercised from the start a great influence in New York city, and its power has continued to increase. To-day it has a number of chapels or branches scattered throughout the town. The most famous of these is

St. Paul's, built in 1764, on the upper end of the land belonging to Trinity, and now the oldest church building on Manhattan Island. An added interest is given to St. Paul's from the fact that Washington worshiped there when President of the United States.

Fraunces' Tavern.—Prominent among our relics of the past is the old tavern of Sam Fraunces, "Black Sam," a patriot of the Revolution. This old hostelry, built in 1730, still stands at the corner of Broad and Pearl streets. It was in 1762 that Fraunces became the proprietor, and from that time until 1776, when the British got control of the city, the tavern was a favorite resort of those patriots who were combining in the cause of American liberty. In its famous "Long Room," Washington

dined that glorious November day in 1783, when at the head of his army he took possession of the city and saw the last of the British soldiers leave our shores. In this room also occurred the final scene of the Revolution — Washington's affecting farewell to the brave officers who had toiled and suffered with him through the dark days of that gloomy war.



OLD ST. PAUL'S.



FRAUNCES' TAVERN.

It is interesting to note that the building was purchased in 1904 by the Society of the Sons of the Revolution, many of whose members are descended from the very officers who were present at the farewell. By this society the old tavern is now preserved as an historical museum — a constant reminder of the time when our country was struggling for the liberties which we enjoy to-day.

APPENDIX

STATISTICS

THE STATE OF NEW YORK

Population, 1910	9,113,614	.	.	.	.	.	(1915) 9,687,744
Area, Land	.	.	47,654	sq. mi.	.	.	
Water	.	.	<u>1,550</u>	sq. mi.	.	.	49,204 sq. mi.
No. of people to 1 sq. mi., 1915	.	.	.	.	.	.	197
Population, Males	.	.	.	.	.	.	(1910) 4,584,597
Females	.	.	.	.	.	.	(1910) 4,529,017
Native	.	.	.	.	.	(Estimated, 1910)	6,887,573
Foreign	.	.	.	.	.	(Estimated, 1910)	2,776,041
White	.	.	.	.	.	.	(1910) 8,966,845
Colored	.	.	.	.	.	.	(1910) 146,769
No. of farms in 1910	.	.	.	.	.	.	215,597
Acreage of farms in 1910	.	.	.	.	.	.	22,084,013
Value of farm property in 1910	.	.	.	.	.	.	\$1,451,481,000
Value of farm products in 1910	.	.	.	.	.	.	\$209,168,236
Capital invested in manufacturing, 1909	.	.	.	.	.	.	\$2,779,497,000
Value of manufactured products, 1909	.	.	.	.	.	.	\$3,369,490,000
No. of manufacturing establishments in 1909	.	.	.	.	.	.	44,935
Aver. no. employed in manufacturing, 1909	.	.	.	.	.	.	1,203,241

COUNTIES

COUNTY	POPULATION, 1915	LAND AREA Sq. Mi.	CHIEF AGRICULTURAL PRODUCTS
Albany	183,330	528	Buckwheat, rye, apples, strawberries, honey.
Allegany	40,216	1,018	Live stock, dairy products, wool, buckwheat, oats, potatoes, maple sugar.
Bronx	615,600	41	Live stock, dairy products.
Broome	90,641	696	Live stock, honey, maple sugar, apples, dairy products, poultry and eggs.
Cattaraugus	72,756	1,330	Live stock, dairy products, poultry and eggs, honey, wool, tobacco, buckwheat, wheat, oats, corn.
Cayuga	65,751	722	Live stock, poultry and eggs, corn, oats, dairy and forest products, maple sugar, apples, grapes, buckwheat, strawberries.
Chautauqua	116,818	1,062	Buckwheat, tobacco.
Chemung	59,017	394	Live stock, dairy and forest products, poultry and eggs, maple sugar, hops.
Chenango	36,648	847	Live stock, potatoes.
Columbia	44,111	647	Live stock, rye, apples, grapes, strawberries.
Cortland	30,074	486	Live stock, dairy products.
Delaware	45,995	1,531	Live stock, dairy and forest products, poultry and eggs, honey, maple sugar.
Dutchess	91,044	800	Live stock, poultry and eggs, corn, rye, fruits, dairy products, apples, peaches, strawberries.
Erie	571,897	1,040	Live stock, dairy products, poultry and eggs, apples, honey, oats, corn, wheat, grapes, and strawberries.
Essex	32,461	1,834	Wool.
Franklin	46,181	1,717	Live stock, potatoes, hops, maple sugar.
Fulton	45,625	486	Live stock, wool, beans, apples, potatoes.
Genesee	40,707	484	Rye, apples, wheat.
Greene	30,091	644	Live stock, strawberries, dairy products.
Hamilton	4,491	1,747	Live stock, dairy products, honey, maple sugar, forest products, oats.
Herkimer	64,109	1,426	Live stock, maple sugar, dairy products, hops.
Jefferson	81,009	1,252	Live stock, wool, beans, potatoes, honey, rye, oats, wheat.
Kings	1,798,513	77	
Lewis	25,947	1,265	
Livingston	38,427	635	

COUNTIES — *Continued*

COUNTY	POPULA-TION, 1915	LAND AREA Sq. Mi.	CHIEF AGRICULTURAL PRODUCTS
Madison	41,742	649	Live stock, dairy products, hops, blackberries.
Monroe	319,310	643	Live stock, poultry and eggs, honey, potatoes, beans, strawberries, wool, rye, oats, corn, wheat, apples, peaches, grapes.
Montgomery	61,030	399	Dairy products, hops, buckwheat.
Nassau	116,825	252	Corn, potatoes.
New York	2,137,747	20	
Niagara	108,550	522	Live stock, poultry and eggs, wool, beans, oats, corn, wheat, apples, peaches, grapes.
Oneida	167,331	1,180	Live stock, dairy products, poultry and eggs, hops, potatoes.
Onondaga	213,992	794	Live stock, dairy products, poultry and eggs, honey, potatoes, tobacco, alfalfa, rye, oats, corn.
Ontario	54,628	652	Live stock, wool, potatoes, beans, hops, nursery products, strawberries, oats, corn, wheat, apples, peaches, grapes.
Orange	118,118	849	Live stock, poultry and eggs, dairy products, peaches, grapes.
Orleans	33,919	396	Live stock, wool, beans, wheat, apples, peaches.
Oswego	75,929	974	Live stock, dairy products, poultry and eggs, tobacco, strawberries, nuts.
Otsego	48,534	978	Live stock, dairy products, poultry and eggs, oats, hops, buckwheat.
Putnam	12,767	239	
Queens	396,727	129	Onions.
Rensselaer	121,330	664	Wool, rye, potatoes, strawberries.
Richmond	98,634	57	
Rockland	46,903	180	
St. Lawrence	90,291	2,810	Live stock, dairy and forest products, poultry and eggs, oats, maple sugar, potatoes, honey.
Saratoga	62,982	830	Rye.
Schenectady	98,625	210	Rye.
Schoharie	23,005	648	Dairy products, buckwheat, honey, hops.
Schuyler	13,954	339	Wool, buckwheat, grapes, peaches.
Seneca	25,249	328	Wheat, peaches, grapes, beans.
Steuben	83,630	1,401	Live stock, dairy products, poultry and eggs, wool, potatoes, grapes, rye, buckwheat, oats.
Suffolk	104,342	918	Poultry and eggs, corn, potatoes, peaches.
Sullivan	38,189	967	Live stock, poultry and eggs.
Tioga	25,549	518	Buckwheat.

COUNTIES—*Continued*

COUNTY	POPULA-TION, 1915	LAND AREA Sq. Mi.	CHIEF AGRICULTURAL PRODUCTS
Tompkins	36,535	477	Live stock, eggs, buckwheat, peaches.
Ulster	85,367	1,128	Poultry and eggs, strawberries, nuts, rye, apples, peaches, grapes.
Warren	32,977	895	Live stock, dairy products, wool, corn, rye, potatoes.
Washington	46,955	797	Live stock, poultry and eggs, beans, oats, corn, apples, peaches, grapes.
Wayne	53,476	624	Apples.
Westchester	321,713	450	Live stock, dairy products, wool, wheat, potatoes, maple sugar, beans, apples, oats.
Wyoming	33,028	603	Wool, beans, wheat, peaches, grapes.
Yates	18,841	348	

CITIES

No.	CITY	COUNTY	POPULATION, 1915	CHIEF MANUFACTURES
1	New York	New York, Kings, Bronx, Queens, Richmond	5,047,221	Clothing, printing and publishing, machine-shop products, beer, refined sugar.
2	Buffalo	Erie	454,630	Slaughtering and meat packing, machinery, flour, automobiles, soap.
3	Rochester	Monroe	248,465	Clothing, photographic apparatus, boots and shoes, machinery, printing and publishing.
4	Syracuse	Onondaga	145,293	Automobiles, machinery, typewriters and typewriters' supplies, clothing.
5	Albany	Albany	107,979	Beer, printing and publishing, machinery.
6	Yonkers	Westchester	90,948	Sugar refining, carpets and rugs, machinery, patent medicines, marble and stone works.
7	Utica	Oneida	80,589	Hosiery and knit goods, machinery, men's clothing.
8	Schenectady	Schenectady	80,381	Electrical machinery, locomotives.
9	Troy	Rensselaer	75,488	Men's furnishing goods, clothing, shirts, collars and cuffs, beer, machinery.
10	Binghamton	Broome	53,668	Tobacco manufactures.
11	Niagara Falls	Niagara	42,257	Chemicals, food preparations.
12	Elmira	Chemung	40,093	Foundry and machine-shop products, lumber products.
13	Jamestown	Chautauqua	37,780	Worsted goods, furniture and refrigerators.
14	Mount Vernon	Westchester	37,583	Brass and bronze products.
15	Amsterdam	Montgomery	34,319	Carpets and rugs, hosiery and knit goods.
16	Poughkeepsie	Dutchess	32,714	Dairymen's and poulterers' supplies.
17	Auburn	Cayuga	32,468	Agricultural implements, cordage and twine.
18	New Rochelle	Westchester	31,758	Printing and publishing.
19	Newburgh	Orange	27,876	Men's clothing, including shirts.
20	Watertown	Jefferson	26,895	Foundry and machine-shop products.
21	Kingston	Ulster	26,354	Tobacco manufactures.

CITIES—*Continued*

No.	CITY	COUNTY	POPULA-TION, 1915	CHIEF MANUFACTURES
22	Oswego	Oswego	25,426	Matches, starch.
23	Cohoes	Albany	23,433	Hosiery and knit goods.
24	Rome	Oneida	21,926	Brass and bronze products.
25	Gloversville	Fulton	21,178	Leather gloves and mittens.
26	White Plains	Westchester	19,287	Planing mills, bakery products.
27	Lockport	Niagara	18,693	Flour-mill and gristmill products.
28	Olean	Cattaraugus	17,925	Petroleum refining.
29	Dunkirk	Chautauqua	17,870	Locomotives.
30	Ithaca	Tompkins	16,750	Printing and publishing.
31	Middletown	Orange	16,381	Cars, condensed milk, leather.
32	Glens Falls	Warren	16,323	Men's clothing, shirts.
33	Lackawanna	Erie	15,737	Iron and steel.
34	Watervliet	Albany	14,990	Iron goods, collars and cuffs.
35	Hornell	Steuben	14,352	Cars, general repair shops for rail-road companies.
36	Ogdensburg	St. Lawrence	14,338	Lumber manufactures, flour-mill products.
37	Saratoga Springs	Saratoga	13,792	Druggists' preparations.
38	North Tonawanda	Niagara	13,498	Lumber products, iron and steel blast furnaces.
39	Corning	Steuben	13,459	Glass.
40	Batavia	Genesee	13,278	Agricultural implements.
41	Geneva	Ontario	13,232	Beer (malt).
42	Little Falls	Herkimer	13,022	Hosiery and knit goods.
43	Cortland	Cortland	12,367	Iron and steel, steel works and rolling mills.
44	Hudson	Columbia	11,544	Hosiery and knit goods.
45	Rensselaer	Rensselaer	11,210	Felt goods.
46	Fulton	Oswego	11,138	Worsted goods.
47	Johnstown	Fulton	10,687	Leather gloves and mittens.
48	Oneonta	Otsego	10,474	Machinery, knit goods.
49	Beacon	Dutchess	10,165	Bricks, rubber goods, hats, boilers.
50	Plattsburg	Clinton	10,134	Automobiles.
51	Oneida	Madison	9,461	Eugenies, wagons, hosiery.
52	Port Jervis	Orange	9,413	Iron products, silk, gloves.
53	Tonawanda	Erie	9,147	Iron products, paper.
54	Salamanca	Cattaraugus	8,370	Tanning manufactures, furniture.
55	Norwich	Chenango	8,342	Hammers, carriages, furniture.
56	Mechanicsville	Saratoga	8,208	Paper, sashes and blinds, knit goods.
57	Canandaigua	Ontario	7,501	Canned goods, tanned products, agricultural implements.

LARGER VILLAGES

HAVING A POPULATION OF OVER 5,000 IN 1915

VILLAGE	COUNTY	POPULATION 1915	VILLAGE	COUNTY	POPULATION 1915
Albion	Orleans	5,988	Malone	Franklin	7,404
Catskill	Greene	5,371	Mamaroneck	Westchester	7,290
Endicott	Broome	5,581	Medina	Orleans	6,079
Fredonia	Chautauqua	5,328	Newark	Wayne	6,468
Freeport	Nassau	7,463	Ossining	Westchester	10,326
Hastings-on-Hudson	Westchester	5,461	Peekskill	Westchester	15,502
Haverstraw	Rockland	5,418	Perry	Wyoming	5,009
Hempstead	Nassau	6,073	Port Chester	Westchester	15,129
Herkimer	Herkimer	9,577	Rockville Center	Nassau	5,223
Hoosick Falls	Rensselaer	5,406	Rye	Westchester	5,339
Hudson Falls	Washington	5,585	Seneca Falls	Seneca	7,018
Ilion	Herkimer	8,900	Solvay	Onondaga	5,886
Lancaster	Erie	5,094	Tarrytown	Westchester	5,752
Lestershire	Broome	5,400	Walden	Orange	5,196
			Waverly	Tioga	5,119

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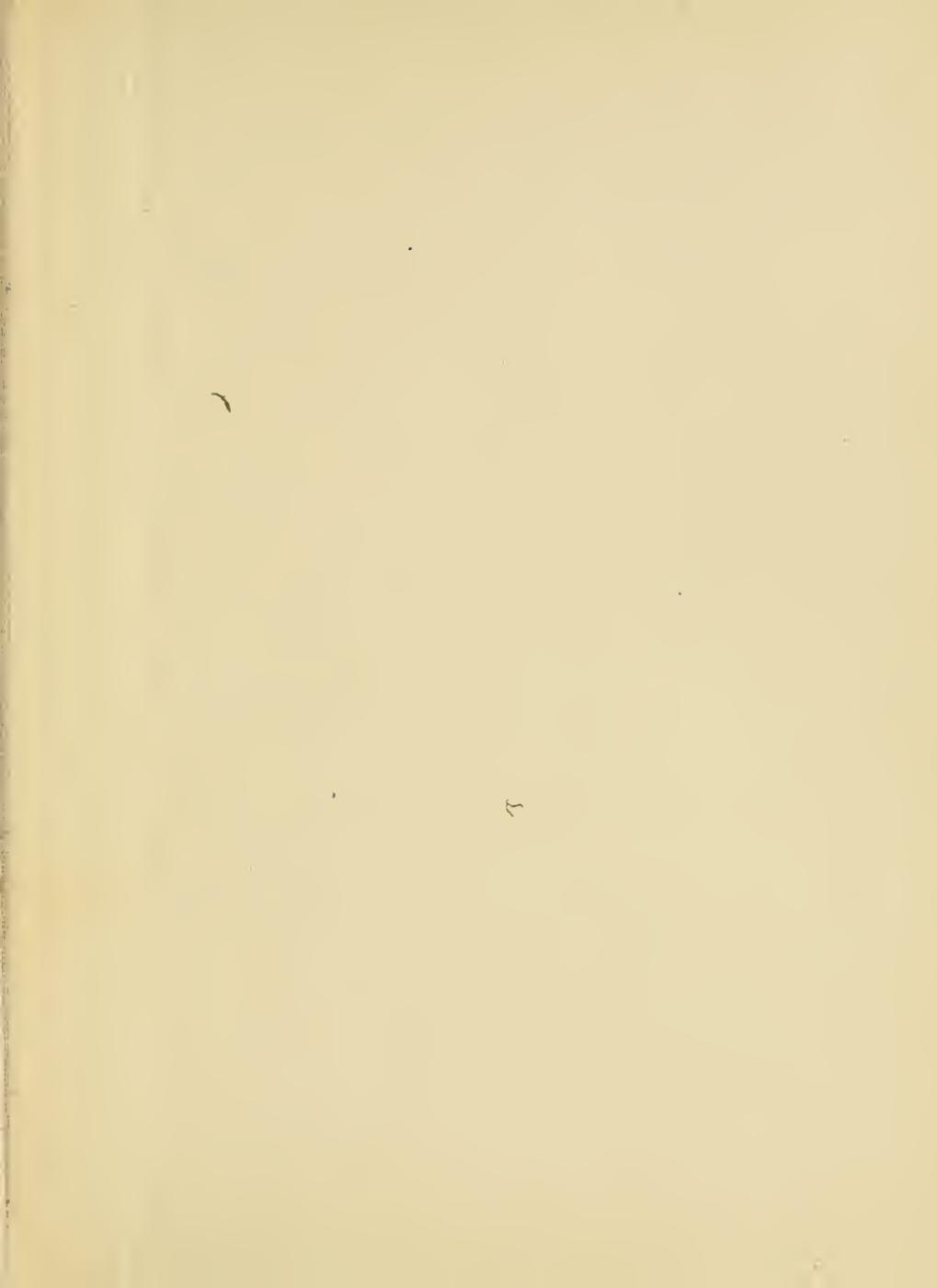
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